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PREVENTION OF RESIDENTIAL FIRE FATALITIES

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HEARING

BEFORE THE

SUBCOMMITTEE ON
SCIENCE, RESEARCH AND TECHNOLOGY

OF THE

COMMITTEE ON
SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

NINETY-NINTH CONGRESS

FIRST SESSION

OCTOBER 9, 1985

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PREVENTION OF RESIDENTIAL FIRE FATALITIES

WEDNESDAY, OCTOBER 9, 1985

House of Representatives,
Committee on Science and Technology,
Subcommittee on Science, Research and Technology,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:40 a.m., in room 2318, Rayburn House Office Building, Hon. Doug Walgren (chairman of the subcommittee) presiding.

Mr. Brown [acting chairman]. The chairman of the subcommittee, Doug Walgren, has asked me to begin the meeting in his temporary absence. He will be here shortly, and expresses his regrets that he can't be here at the beginning. He has asked me to read his opening statement, which I will try and do in the same eloquent way that he would have, and it will appear as if he had said it himself.

Today the subcommittee will hold a hearing on residentical fire fatalities. Each year approximately 6,000 persons are killed by fire. Eighty percent of all deaths from fire occur in our homes. By far, residential fires are the Nation's major fire problem. By the time this hearing is over, approximately at noon, three more people will be dead from fires, one fire fatality occurring about every hour, and chances are that the ones killed will be either elderly—age 65 or over—or very young—10 years of age or less. The saddest thing is that children under 5 years make up 17 percent of the Nation's fire fatalities.

A stunning fact that came out of recent authorization hearings on the Federal Fire Prevention and Control Act is that most people killed by fire are dead before any fire department arrives on the scene. The popular image of children's books, of firemen arriving in the nick of time to rescue someone from a flaming building, is in most cases simply a fairy tale. Firemen risk their lives, giving every ounce of effort in their bodies, on the chance a life may be saved, but the hard fact is that in most instances victims are lying dead on the floor, overcome by smoke or deadly fumes, not flames, when our firemen arrive.

Clearly smoke detectors, residential sprinkler systems, public education programs, and the potential in fire hazard modeling are essential to prevention of residential fire fatalities. Firefighters may save the building but, by and large, only fire prevention can save lives.

This hearing will give the subcommittee an opportunity to review current research programs, technological advances, and public education programs that have been developed to prevent residential fire deaths. It's too bad that National Fire Prevention Week, October 6 to 12, is about the only time that national attention is drawn to this preventable tragedy. The problem touches all of us and is too large to be ignored.

We are looking forward to hearing from all of our witnesses and learning more about what is being done to prevent residential fire fatalities and make our homes safer.

Now I would like to recognize our ranking minority member, the Honorable Sherwood Boehlert, for a brief statement.

Mr. **Boehlert**. Thank you very much, Mr. Chairman. You didn't disappoint us. Your eloquence is there as usual.

Mr. **Brown**. Thank you.

Mr. **Boehlert**. I am pleased that the committee is convening this hearing on a problem which has plagued societies the world over for centuries. Residential fires account for more loss of life than fire-related incidents, and research and development in this area should be supported at all levels. Our support cannot be limited, however, to product development, because an uneducated public cannot avail themselves of technology of which they are unaware.

The job ahead of us is twofold. We must educate the public on the very real risk of fire and we must ensure, through our legislation, insurance agreements, and building codes, that vital research results are validated, agreed upon by fire-related agencies, adopted by code-makers, transferred to the manufacturer, and made available to the consumer.

This coordinated effort is not an easy task. If everyone realized the risks at hand, the pressure from society alone would maintain the momentum of the process. The fact is that our support of and awareness of the problem wanes, until a tragic loss of life and property drives the importance home.

I look forward to the testimony of our distinguished witnesses this morning and to their views on how we can best support the public against the tragedy of fire loss.

Mr. **Brown**. Thank you very much, Mr. Boehlert.

Will our first panel please come to the table? Mr. Bragdon from FEMA, Dr. Snell, Director of the Center for Fire Research at NBS, and Mr. Scanlon, Chairman of the Consumer Product Safety Commission. All of you gentlemen are engaged in vital aspects of this important program and we are looking forward to hearing your testimony.

Mr. Bragdon?

STATEMENT OF CLYDE A. BRAGDON, JR., ADMINISTRATOR, U.S. FIRE ADMINISTRATION, FEDERAL EMERGENCY MANAGEMENT AGENCY

Mr. **Bragdon**. Mr. Chairman and members of the committee, I am Clyde A. Bragdon, Jr., Administrator of the U.S. Fire Administration. Also at this time I serve as the Associate Director of Training and Fire Programs of the Federal Emergency Management Agency. It is certainly a privilege to join with my colleagues who have the same mission in mind relative to the fire problem of this country, Terry Scanlon, Chairman of the Consumer Product Safety Commission, and Dr. Jack Snell, Director of the Center for Fire Research.

I appreciate this opportunity to testify before the subcommittee today on the goals and achievements of FEMA's fire programs authorized by this committee to reduce the Nation's residential fire death rate. Since this is National Fire Prevention Week, I consider this a most appropriate time for the committee to address these issues.

Eleven years have passed since Congress approved the Federal Fire Prevention and Control Act. The act established new national authorities and focus to reduce the devastating fire losses we face each year. Annual losses have been cut significantly in the past 11 years. The collective successes realized in the lives and dollars saved from fire have had their genesis with the many dedicated people and the exemplary programs in America's fire services and its allied professional organizations, but the losses do remain staggering and demand our continued and immediate attention.

We can ask ourselves how and when we will reach a goal of achieving a fire-safe America. The answer we feel lies in public awareness of the fire problem and, most importantly, in our citizens' acceptance of their responsibility for its solution. Apathy is fire's greatest ally. We must work to change those attitudes of apathy. Federal fire programs should continue to be an important force in focusing attention on the fire problem and solutions to those problems. At the same time, we must recognize that ultimate solutions reside with local governments in each community and with each individual citizen.

FEMA has two important functions which share the common goal to save lives from fire and reduce property losses. The U.S. Fire Administration works through programs of research and applied engineering, and the National Fire Academy focuses on training and education for fire officials at all levels of Government.

Residential fires remain our Nation's No. 1 fire problem. You have already given some of the initial data that three out of every five deaths in this country occur in residential occupancies.

What are we doing to reduce the residential fire problem? The first step, obviously, in any problem-solving is understanding the cause. By collecting and analyzing State and local fire data through the National Fire Incident Reporting System, we can pinpoint how many people are affected by fires, what type of factors are the leading causes of fires, what age groups—as you have pointed out—are most seriously threatened, and what areas of the country have the highest risk.

With this information, we are utilizing public awareness and education programs designed to put our Nation's fire resources to work in the areas of greatest risk. Basically, data is provided to State and local officials so they can make this analysis also for their respective jurisdictions. With this statistical knowledge of the nature of the fire problem, we have focused on several programs for combating home fire deaths. I would like to briefly mention three major program initiatives today.

You have also pointed out the extremes in our citizens, the old and very young, who are affected by fire. I would like to further point out that those fires occur also in extremes—in our inner cities, which represent certainly part of our socioeconomic problem, and in rural America as well, in communities of 5,000 or less.

The first major program initiative for reducing home fire deaths is public awareness. Public awareness of fire translates into prevention and protection. Home fire safety, in terms of becoming "fire smart," is what public awareness is all about. A fire-smart public can prevent most fires and protect itself against almost all fires.

This year we are launching a major national public awareness campaign. The work will be performed by Ogilvy and Mather, one of the leading public affairs/advertising companies in this Nation. Using the latest data and fire trends, the project will assist us in formulating an improved strategy for fire prevention and in implementing at least two national public awareness campaigns aimed at reducing our target—residential fires. Another part of this new effort will be to integrate public awareness components into all of our fire programs of the U.S. Fire Administration. Public awareness is most effective when it is an integral part of every fire safety program.

I should point out and give emphasis that we find many times in the fire community that we have been talking to ourselves. We need to enlarge that circle of involvement, and our effort in public awareness will be to support and reinforce those efforts of other fire organizations, and not to compete with them. We hope this will be a true partnership effort.

We have sponsored public service announcements on residential fire safety which are now running across the country. We are continuing to sponsor the Sesame Street fire safety program for young children. We produce numerous public service pamphlets on fire safety in the home, but we know more needs to be done and we plan to make a breakthrough with this major awareness effort. By promoting national awareness of fire, the stage is set for teaching people about prevention and having them accept the responsibility for their protection, their survival, and their property—to reinstill in this country the self-reliance that people once had.

One of the success stories of the last decade has been the smoke detector and the coverage it has provided in our homes. Through shared efforts in public education and in the development and implementation of the technology, three out of every four homes in America now have smoke detectors, according to a recent Harris poll. Thirty-eight States and the District of Columbia have smoke detector requirements in their laws. The success in the use of smoke detectors is a statement of cooperation among Federal agencies, local governments, and the private sector.

One area where we need to intensify our awareness efforts this year will be in the maintenance of those very same smoke detectors. Smoke detectors must be kept in working order, and getting that word out is one of our goals.

While smoke detectors have made a significant contribution in saving lives by providing that early warning, we also need to be able to quickly put out the fires that so tragically strike many that are unable to escape—the young, the handicapped, the elderly. Statistically a person over 75 is at 2½ times greater risk of dying in fire than the average citizen. Children under 5 have almost three times greater risk of death from fire. For these age groups, smoke detector warnings are often not enough. They need residential sprinkler systems to put out that fire and reduce the effects of the toxic fire gases.

A second major initiative underway in the residential fire field is the advancement and use of quick-acting residential sprinklers. These sprinklers are both lifesaving and cost-effective. Depending on heat spread and other factors, most quick-acting sprinkler heads will activate in 30 to 90 seconds after fire ignition, well before the fire department can respond—as you gave emphasis—and often before the smoke detector goes off.

Research is underway to develop systems that are within the financial reach of the average homeowner and landlord. We are looking for better ways and more affordable ways to retrofit structures that are already in existence, particularly those target structures. For new homes, the systems can be installed for less than $1 per square foot, a small price to pay for fire and life safety.

This year we are focusing our residential sprinkler programs on target, high-risk audiences. Demonstration projects for the elderly and handicapped are planned. Retrofitting of existing residences will be given priority, as we continue to work with the National Association of Homebuilders to encourage those builders to include sprinkler systems in their construction and design. We feel that the marketing of life safety is as important as marketing of housing itself.

Once again, the key will be educating the public in the need for and the availability of residential sprinklers. To meet this goal, with cooperation from the private sector, we have retrofitted 20 mobile demonstration units with quick-acting sprinkler systems to be used as demonstration models. At the conclusion of my remarks we will show a tape on how that system works. These mobile units have been demonstrated before local and State government officials, resulting in consideration of sprinkler residential codes. If we are to protect our citizens, we must begin at the local level, and one of the most effective ways is by showing the lifesaving capabilities of the quick-acting residential sprinkler systems.

The third and final area I would like to address today is the National Community Volunteer Fire Prevention Program. Until we establish a working relationship within each community to combat fire, the gains will be minimal. Our agency is working to create a cohesive partnership with citizens, business, volunteer and community-based organizations, the fire service, and government.

Commonly referred to as "Partnerships Against Fire," this program was established by Congress in 1984 and was built around the concept of total community involvement. The community shares in the problem and in the solution to the residential fire problem. Thirty pilot programs were set up in 10 States in 1984. In 1985, 10 more States were added, along with the District of Columbia, with 32 more community projects established. The goal ultimately is to establish these projects in all 50 States.

Since fire problems vary from community to community, no single effort can be tailored to meet the needs of every community. An important feature of this "Partnerships in Fire" program is that the particular needs of the community are identified by its citizens and fire safety measures are then fashioned by those same citizens to meet local needs. Federal involvement is minimal.

The National Governors Association assists us in administering the program and monitoring these projects. After 3 years, each project will be self-sustaining, with full funding from the local community, and, we hope, with major involvement from the private sector. The objective of the program is to increase local awareness of fire problems through community participation. Community volunteers are the cohesive agents through which the program works to strengthen existing fire programs or create new ones. Each State selects an urban, suburban, and rural project. These programs can be replicated in other communities with similar fire problems. I would like to describe briefly three of these outstanding community programs.

In the State of Pennsylvania this last Monday a demonstration was given of one project. The Museum of Scientific Discovery in Harrisburg was selected to establish an urban fire safety program exhibit. They received a $25,000 grant to educate children between the ages of 4 and 15 about fire safety. Bright colors and bold graphics attract children to the "GET OUT, STAY OUT" exhibit, which features a computer-driven fire safety program. Using a stylus, children help the "firehouse mouse" follow the guidelines of fire safety. The program is further personalized as each child uses the computer to draw a model of his or her bedroom and plan escape routes. A printout of the bedroom goes home with each child for family discussion.

In the State of Louisiana, the Kiwanis Club of Houma used their suburban project grant in a variety of ways, including the production of three 30-second PSA's which are shown on four cable television channels. Six billboards were used throughout the parish for 1 month for different fire safety messages. Program funds paid for five billboards, and one was donated. Program funds paid for the teaching of the "Learn Not To Burn" curriculum in 240 classrooms, reaching 8,000 students in kindergarten through second grade.

In the State of Iowa, the Red Oak Rotary Club rural project installed 500 smoke detectors the first year. From a questionnaire they used when installing the detectors, they found that the detectors were reaching their target groups—residences with elderly and children. They learned that 65 percent of the households wanted classes on fire prevention, so they contacted a burn specialist in Des Moines to run several public seminars. In their words, "We have found a greater need and demand than anticipated for smoke detectors and fire education within the community."

"Partnerships Against Fire" is working because citizens are becoming involved. When people are aware, they care. Programs such as these are investments in our future. They reach our children and our senior citizens. The children of this Nation must have the benefit of fire safety and survival education at that very impressionable age, reinforced throughout their formative years. Our senior citizens, who have made their contribution and have paid their dues, must be offered a role in fire safety and thus be protected.

This picture would not be complete, of course, without the great training programs offered by the National Fire Academy in residential fire safety. The academy trains America's fire educators as well as other fire service leaders. Through the academy's executive development courses, fire service managers stay on top of the latest technology and trends in fire prevention and protection. If we are to reduce significantly this Nation's fire deaths, it will be due in large measure to those dedicated men and women of the fire service who, through training and education, labor tirelessly to reach the public.

In closing, let me reaffirm the commitment of the Federal Emergency Management Agency in reducing this Nation's fire losses. I firmly believe that through consensus, cooperation, coalition, and even a little coercion, we can create a fire-safe America.

I would like at this time to beg your indulgence while we show you three video clips that demonstrate what we are doing to save lives. The first two are USFA-sponsored public service announcements, one on smoke detectors and one on the danger of smoking. The final video is from the national show, "Believe It Or Not," which features FEMA's residential demonstration sprinkler trailer. When the showing is complete, or after this panel, I certainly will welcome your questions. Thank you.

[The first short video presentation was made.]

"Everybody I know thinks that smoke detectors are a good idea. I mean, they do save lives, and everybody knows that, but you've got to go to the store, you've got to bring them home, get out the ladder and hang them up, and test the batteries every now and then. Everybody means to get around to it. Little Kim's parents meant to get around to it, too—but they never did.

"Don't let this happen: Write the National Fire Information Council, Box 23, Hope, MI 48842."

[The second short video presentation was made.]

"Who do they think they are, telling me I shouldn't smoke in bed? And the nerve, telling me to check the trash cans and look behind seat cushions after a party for lit cigarettes. How dare they say I might be careless with my smoking when I'm drinking? Me, careless? Impossible. What do they know anyhow?

"A fire safety message from the National Fire Information Council."

[The third short video presentation was made.]

"At the National Fire Academy, they have a new way to save lives. This trailer is a special demonstration vehicle equipped with a potent new sprinkler system that stops fires almost instantly.

"Under ordinary circumstance, setting a fire like this could be a lethal act. It may be hard to believe, but this fire will grow and spread with surprising speed. In little more than a minute it would transform a room like this into a deadly inferno. Every year more than 150,000 Americans are killed or injured by fires like that one. It's well worth getting a little wet, if what you get in return is instant fire extinction like that.

"This is new kind of sprinkler system. The sprinkler head reacts five times faster than those in commercial use. Fire service experts would like to see it in every house and apartment in the country. After all, it's tragic but true that 8 out of every 10 Americans who die in fires, die in their own homes."

Mr. Chairman, I would like to add that we are certainly pleased with the efforts of America's fire service and their support groups. What we indicate and reinforce through data collection sources—

that is, the NFPA and USFA's National Fire Incident Reporting System—is that we hope to see a reduction from 1983 to 1984 in fire deaths. We certainly hope that this trend continues.

But in doing so we still have lost over 5,000 Americans to fire in 1984, and 117 firefighters gave their lives in the line of duty. This coming Sunday, October 13, at the National Fire Academy in Emmittsburg, MD, we will have our annual National Fallen Firefighters Memorial Services at 10 in the morning. Certainly all of you are welcome to attend if your schedules so permit. Thank you.

[The prepared statement of Mr. Bragdon follows:]

STATEMENT OF CLYDE A. BRAGDON, JR.
ADMINISTRATOR, UNITED STATES FIRE ADMINISTRATION
AND ACTING ASSOCIATE DIRECTOR OF
THE TRAINING AND FIRE PROGRAMS DIRECTORATE
OF THE
FEDERAL EMERGENCY MANAGEMENT AGENCY

BEFORE THE

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COMMITTEE ON SCIENCE AND TECHNOLOGY
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OCTOBER 9, 1985

Mr. Chairman and Members of the Committee. I am Clyde A. Bragdon, Jr., Administrator of the United States Fire Administration. Also, at this time I serve as the Associate Director of Training and Fire Programs of the Federal Emergency Management Agency.

I appreciate this opportunity to testify before the Subcommittee on Science, Research and Technology today on the goals and achievements of FEMA's fire programs authorized by this Committee to reduce the Nation's home fire death rate. Since this is National Fire Prevention Week, I consider this a most appropriate time for the Committee to address these issues.

A decade has passed since the Congress passed the Federal Fire Prevention and Control Act. The Act established new national authorities and focus to reduce the devastating fire losses we faced each year. Annual fire losses have been cut significantly in the past 10 years. The collective successes realized in the lives and dollars saved from fire have had their genesis with many dedicated people and exemplary programs. But the losses remain staggering and demand our continued and immediate attention.

How and when will we reach our goal of achieving a fire safe America? The answer lies in public awareness of the fire problem and, most importantly, in our citizens' acceptance of their responsibility for the solution. Apathy is fire's greatest ally. We must work to change those attitudes of apathy. FEMA's fire programs will continue to be a important force in focusing attention on the fire problem and solutions to those problems. At the same time, we recognize that ultimate solutions reside with local governments, in each community, and with each citizen.

FEMA has two important functions which share the common goal to save lives from fire and reduce property losses, The U.S. Fire Administration works through programs of research and applied engineering and the National Fire Academy focuses on training and education for fire officials at all levels of government.

Residential fires remain our Nation's number one fire problem. In 1984, fires in the home accounted for three out of every four fire deaths, five out of every six fire injuries, and almost half of all direct fire property loss in the United States.

What are we doing at FEMA to reduce the residential fire problem? The first step in solving any problem is understanding the cause. By collecting and analyzing State and local fire data through the National Fire Incident Reporting System (NFIRS), we can pinpoint how many people are affected by fires, what types of factors are the leading causes of fires, what age groups are most seriously threatened, and what areas of the country have the highest risks. With this information, we are utilizing public awareness and education programs designed to put our Nation's fire resources to work in the areas of greatest risk. Basically, data is provided to State and local officials so they can make this analysis for their respective jurisdictions.

With this statistical knowledge of the nature of the fire problem, we have focused on several programs for combatting home fire deaths. I would like to mention three major program initiatives today.

The first major program initiative for reducing home fire deaths is public awareness. Public awareness of fire translates into prevention and protection. So let's talk about fire safety in terms of becoming "fire smart" because that is what public awareness is all about. A fire-smart public can prevent most fires and protect itself against almost all fires.

This year, USFA is launching a major, national public awareness campaign. The work will be performed by Olgivy and Mather, one of the leading public affairs/advertising companies in the world. Using the latest data and fire trends, the project will assist us in formulating an improved strategy for fire prevention and in implementing at least two national public awareness campaigns aimed at reducing residential fires. Another part of this new effort will be to integrate public awareness components into our USFA programs. Public awareness is most effective when it is an integral part of every fire safety program.

We have sponsored public service announcements (PSA's) on residential fire safety which are now running across the country. We are continuing to sponsor the Sesame Street Fire Safety Program for young children. We produce numerous public service pamphlets on fire safety in the home. But we know more needs to be done, and we plan to make a breakthrough with our major public awareness effort.

By promoting national awareness of fire the stage is set for teaching people about prevention and having them accept the responsibility for their protection, their survival, and their property.

One of the success stories of the last decade has been smoke detector coverage. Through shared efforts in public education and in the development and implementation of the technology, three out of four homes in America now have smoke detectors, according to a Harris poll. Thirty-eight States and the District of Columbia have smoke detector requirements on their books. The success in the use of smoke detectors is a statement of cooperation among Federal agencies, local governments and the private sector.

One area where we will intensify our awareness efforts this year is in the maintenance of smoke detectors. Smoke detectors must be kept in working order, and getting that word out is one of our goals.

While smoke detectors have made a significant contribution in saving lives by providing early warning, we also need to be able to quickly put out the fires that so tragically strike many unable to escape -- the young, the handicapped, and the elderly. Statistically, a person over 75 is at two and a half times greater risk of dying in fire than the average citizen. Children under five have almost three times greater risk of death from fire. For these age groups, smoke detector warnings are often not enough; they need residential sprinklers that put out the fire and reduce the effects of toxic fire gases.

The second major initiative underway in the residential fire field is the advancement and use of quick acting residential sprinklers. These sprinklers are both life saving and cost effective. Depending on heat spread and other factors, most quick acting residential sprinkler heads will activate in 30-90 seconds after fire ignition, well before the fire department can respond and often before the smoke detector goes off. Research is underway to develop systems that are within the financial reach of the average homeowner and landlord. We are looking for affordable ways to retrofit structures already in existence. For new homes, the system can be installed for less than a dollar per square foot, a small price to pay for fire and life safety.

This year, we are focusing the residential sprinkler program on target, high-risk audiences. Demonstration projects for the elderly and the handicapped are planned. Retrofitting of existing residences will be given priority as we also continue our work with the National Association of Homebuilders to encourage builders to include sprinkler systems in their construction and design.

Once again, the key will be educating the public in the need for and availability of residential sprinklers. To meet this goal, with cooperation from the private sector, we have retrofitted 20 mobile demonstration trailers with quick acting residential sprinkler systems to be used as demonstration models. Designed to look like typical living areas, these trailers are located in every region of the country and are available for public demonstrations. At the conclusion of my remarks, I will show you a tape on how the system works. These mobile units have been demonstrated before local and State government officials, resulting in consideration of residential sprinkler codes. If we are to protect our citizens, we have to begin at the local level, and one of the most effective ways is by showing the life saving capabilities of the quick acting residential sprinklers.

The third and final area I would like to address today is the National Community Volunteer Fire Prevention Program. Until we establish working relationships within each community to combat fire, the gains will be minimal. Our agency is working to create a cohesive partnership with citizens, business, volunteer and community-based organizations, the fire service and government. Known as "Partnerships Against Fire," this program was established by Congress in 1984 and is built around the concept of total community involvement. The community shares in the problem and in the solution to the residential fire problem. Thirty pilot programs were set up in 10 States in 1984. In 1985, ten more States were added, along with the District of Columbia, with 32 more community projects established. The FEMA goal ultimately is to establish projects in all 50 States.

Since fire problems vary from community to community, no single effort can be tailored to meet the needs of every community. An important feature of this "Partnerships in Fire" program is that the particular needs of the community are identified by its citizens and fire safety measures are then fashioned by those same citizens to meet the local needs. Federal involvement is minimal.

The National Governors Association assists us in administering the program and monitoring the projects. After three years, each project will be self-sustaining with full funding from the local community. The objective of the program is to increase the local awareness of fire problems through community participation. Community volunteers are the cohesive agents through which the program works to strengthen existing fire programs or create new ones.

Each State selects an urban, suburban, and rural project. The programs can be replicated in other communities with similar fire problems. I would like to describe three of these outstanding community programs:

In the State of Pennsylvania, the Museum of Scientific Discovery in Harrisburg was selected to establish an urban fire safety program exhibit. They received a $25,000 grant to educate children between the ages of 4 and 15 about fire safety. Bright colors and bold graphics attract children to the GET OUT, STAY OUT exhibit which features a computer-driven fire safety program. Using a stylus, children help a firehouse mouse follow the guidelines of fire safety. The program is further personalized as each child uses the computer to draw a model of his or her bedroom and plan escape routes. A printout of the bedroom goes home with each child for family discussion.

In the State of Louisiana, the Kiwanis Club of Houma used their suburban project grant in a variety of ways including the production of three 30-second Public Service Announcements which are shown on four cable channels. Six billboards were used throughout the Parish for one month with different fire safety messages. Program funds paid for five billboards, and one was donated. The program funds paid for the teaching of the Learn Not To Burn curriculum in 240 classrooms, reaching 8,000 students in Kindergarten through second grade.

In the State of Iowa, the Red Oak Rotary Club rural project installed 500 smoke detectors in the first year. From a questionnaire they used when installing the detectors, they found that the detectors were reaching their target groups -- residences with elderly and children. They learned that 65% of the households wanted classes on fire prevention so they contacted a burn specialist in Des Moines to run several public seminars. In their words, "We have found a greater need and demand than anticipated for the Smoke Detectors and Fire Education within the community."

Partnerships Against Fire is working because citizens are becoming involved. When people are aware, they care. Programs such as these three are investments in our future. They reach our children and our senior citizens. The children of this Nation must have the benefit of fire safety and survival education at an impressionable age, reinforced through their formative years. Our senior citizens, who have made their contributions and paid their dues, must be offered a role in fire safety and must be protected.

The picture would not be complete, of course, without the great training programs of the National Fire Academy in residential fire safety. The Academy trains America's public fire educators as well as other fire service leaders. Through the Academy's Executive Development courses, fire service managers stay on top of the latest technology and trends in fire prevention and protection. If we are to reduce signicantly the Nation's fire deaths, it will be due in large measure to those dedicated men and women of the fire service who through training and education labor tirelessly to reach the public.

In closing, let me reaffirm the commitment of the Federal Emergency Management Agency to reducing the Nation's fire losses. I firmly believe that through consensus, cooperation, coalition, and even a little coercion, we can create a Fire Safe America.

I would like at this time to show you three video clips that demonstrate what we are doing to save lives. The first two are USFA sponsored public service announcements; one on smoke detectors, and the other on the danger of smoking. The final video is from the national show "Believe It Or Not" which features FEMA's residential sprinkler demonstration trailer. When the showing is completed, I welcome your questions.

Mr. Brown. Thank you very much, Mr. Bragdon, for a very fine statement and for the film clips, which were very helpful also. I would like to go ahead and hear from your two colleagues, and then we will ask questions of all of you.

Would you go ahead, Dr. Snell, with your statement?

STATEMENT OF DR. JACK E. SNELL, DIRECTOR, CENTER FOR FIRE RESEARCH, NATIONAL ENGINEERING LABORATORY, NATIONAL BUREAU OF STANDARDS

Dr. Snell. Thank you very much, Mr. Chairman. My name is Jack Snell. I am Director of the Center for Fire Research at the National Bureau of Standards, and am serving as cochairman of the National Fire Research Strategy Conference. My written statement is a little lengthy. If it would please the chairman, I would be happy to summarize it in the interests of time.

Mr. Brown. It would please the chairman considerably if you would shorten it up a little. The full text will appear in the record.

Dr. Snell. Thank you, sir.

As Administrator Bragdon has pointed out, home fires lie at the very heart of the fire problem, and also most of the people who die in fire die at home, one or two at a time. The purpose of my remarks is to focus on the role of fire research and what it is doing to provide means to greatly reduce these needless losses. In doing so, I would like to say a few words about the bases or determinants for the home fire problem and the impact fire research is having on it.

Most residential fires result from the failure of people to adequately weigh and respond to the risks of fire that confront them. Who are these people? These people are children, their parents, their schoolteachers. They are product developers. They are fire and code officials. They are all of us.

How is it? What are these risks? The inability of people to confront the risks of fire can arise in three ways. First of all, they may not know what risks they face. If they do, they may not know how to respond, and even then they may lack the means of doing so.

Fire risk depends on two factors: The likelihood of fire occurring and the severity of a fire, once started. Fire research can provide means to address both. Fire technology and fire research can provide the technical basis for new and improved technologies on the one hand and for credible information on the other, to help those who have the problem of addressing fire risk become convinced it is in their interest to deal with it.

In my statement, I cite many examples of where research-based new technology has addressed both the likelihood and severity of fire. For example, in the past development of test methods and ultimately standards for cigarette ignition resistant mattresses has greatly reduced the likelihood of fire from smoking in bed, which was a major cause of death, particularly among the elderly in that scenario. Smoke detectors are another example of the impact of technology in reducing the severity of fire, as opposed to its likelihood. The development of children's sleepwear standards nearly a decade ago has virtually eliminated this awful and tragic loss of infant life, through eliminating both the likelihood and the severity of fire from this scenario. A present example is the quick-response sprinkler that has been demonstrated to you by Mr. Bragdon.

In the future, as mentioned in your opening comments, we see fire risk and hazard models having a very significant impact in further reducing loss of life and property to fire, particularly in residential fires. Why? Simply because for the first time these powerful new tools provide practical means for quantitative evaluation of fire risk and hazard.

Again, my statement has a number of examples of the extent to which these powerful new tools are already being used, but the central question is, how will these models help reduce the residential fire problem? That is, how can they help reduce the likelihood of fire and the severity of fires that arise?

Well, I see four ways, Mr. Chairman. The first of these is that these models will help provide means to evaluate the vulnerability of people to various fire hazards. For example, consider the case of furnishings, of home furnishings. Furnishings can be developed which are highly cigarette ignition resistant. Furnishings can be developed, some of those are also very highly subject to flaming ignition and create tremendous hazards in that instance. The hazards to people from furnishings in buildings are very difficult to conceptualize. It's very difficult for most people to understand how rapidly smoke can develop and fill a house. Fire models help us provide ways to establish how much time is available for escape, what the specific role of a particular material or product would be in the evolving fire hazard, and the effectiveness of the technologies developed in addressing it.

The second area in which I believe fire models will help reduce the residential fire problem is in providing means to develop and evaluate new technologies for responding to it. For example, the existing smoke detectors and fast-acting sprinklers will have a very significant impact in reducing loss of life to fire, but at a given cost. I think it would be foolish for us to expect that we have seen the full extent of possible technical development of early warning and suppression technologies. These technologies have been developed on a very, very crude understanding of, for example, how water puts out fire.

Not only will further research lead to very fast-acting early warning and much more effective suppression systems, but also we would expect technologies which are considerably more affordable than those presently before us. Think back, for example, to the development cycle of the home smoke detectors and the tremendous reduction in cost advanced electronic technology has brought to that field. Certainly better understanding of suppression technology could offer significant reductions in the cost of that technology.

What is the role of models? The role of models in that instance is helping to understand and develop performance criteria for these technologies, to guide and accelerate their development.

The third area in which I believe fire models will help impact the residential fire problem, and perhaps the most important, is providing tools for people, tools for individuals to evaluate the impacts of their behavior on their own fire safety, to understand the foolishness of some of our current habits and help us appreciate the benefits we would derive from altering these behaviors.

I am led to—in fact, I believe I have used with you before—the analogy of commercial airline pilots and the extent to which they make use of computer-based simulators of flight to encounter safely the most hazardous conditions of flight. Shouldn't we have a vision in which every school child has the same opportunity to exercise with his parents on their home computer and practice fire safety behaviors, and understand in graphic terms the impact of their old behaviors and the effect of new ones? Fire models are providing the basis for such tools today.

The fourth area in which I believe fire and risk models will help reduce the residential fire problem is providing a solid basis for sensible and convincing means to evaluate the tradeoffs inherent in the fire problem and to motivate people to change their behaviors—that is, to see their own self-interest in doing so. I would like to cite two examples.

The first is from another area of technology with which I believe the committee is familiar, and that has to do with energy conservation and the role of nighttime thermostat setback in saving energy. A little over a decade ago there was dispute among the professional heating and refrigerating—air-conditioning—engineers as to whether or not, believe it or not, nighttime thermostat setback would save energy. How, with that kind of a dispute going on, could the public at large be convinced it was a good idea to do so?

It wasn't until scientifically valid computer models were developed to be able to demonstrate this, and those were validated in terms of full-scale tests, that that message got through to the professional engineering community and, through them and through public information efforts, to the public at large. Now I venture to guess most people know that nighttime thermostat setback saves energy.

Another case in point in the fire area, one could draw a similar cast against this analogy, is the use of residential sprinklers. Crucial in terms of understanding the trade-offs is understanding the benefits in relation to the costs. These models can help us do that.

Well, where are we now in terms of delivering these models and having them? Of course, that is discussed in some length in my written statement. I think we have made tremendous progress.

The final question is, What are we doing to get this information out and the results to the public? In the last 5 years there has been a very exciting level of increased coordination and cooperation within the fire community, that includes efforts within fire research, through the programs described by my colleagues today, and into the media in getting the word out to the public.

One aspect of this was demonstrated earlier this summer in the National Fire Research Strategy Conference, in which the chairman and the ranking minority of this committee participated, and it involved 120 leaders of fire research and the users of fire research together, joining together to develop a strategy for fire research, to provide the technical tools and information needed to make our programs effective and to make the public information solid, convincing, and effective in reducing this problem.

I believe a number of members of the panel have seen the fire and smoke transport model for predicting fire hazard. We invite you to come and visit our fire model simulation laboratory. I could go on at length in terms of the research activities underway but they are outlined in detail in my statement.

In conclusion, Mr. Chairman, I believe it is crucial that the importance of fire research in providing a solid basis for reducing residential fire losses not be underestimated and that every effort be made to sustain this effort as a part of the national fire response. Thank you, sir.

[The prepared statement of Dr. Snell follows:]

U.S. DEPARTMENT OF COMMERCE

STATEMENT OF
JACK E. SNELL, DIRECTOR
CENTER FOR FIRE RESEARCH
NATIONAL ENGINEERING LABORATORY
NATIONAL BUREAU OF STANDARDS

BEFORE THE

SUBCOMMITTEE ON SCIENCE, RESEARCH AND TECHNOLOGY
COMMITTEE ON SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
ON PREVENTION OF RESIDENTIAL FIRE FATALITIES

OCTOBER 9, 1985

INTRODUCTION

Mr. Chairman, Members of the Subcommittee my name is Jack Snell. As Director of the Center for Fire Research at the National Bureau of Standards, and as Co-Chairman of the National Fire Research Strategy Conference, I very much appreciate the opportunity to contribute to this discussion of residential fires. Home fires lie at the heart of the United States fire problem. Most of the people who die in fire die in homes one or two at a time. Fire research is providing means to greatly reduce these tragic losses.

By way of overview, I will first say a few words about the determinants of the residential/home fire problem to provide a framework for subsequent discussion of the impacts - past, present, and future - of fire research.

THE RESIDENTIAL/HOME FIRE PROBLEM

Most residential fires and losses result from the failure of people to weigh adequately and respond to the risks of fire that confront them. This may occur in several ways. People may not know what risks they face. Or, if they do either they don't know how to respond or they lack the means of doing so.

Fire risk depends on two factors: the likelihood of a fire occurring, and the severity of its outcome. Therefore in its simplest form the solution to the home fire problem can be stated as "helping people - children, parents, homeowners, landlords, the elderly, builders, designers, product manufacturers, fire and code officials, etc. - understand and change extant fire risks." This can be done by addressing one or preferably both of the determinants of fire risk.

The likelihood of fire depends on a number of factors most of which people could readily control themselves if only they recognized their importance. For example, these include..........

Behavior - e.g. untidiness, careless smoking and drinking, inattention to hazardous conditions, etc. - which could readily be changed.

Energy sources - e.g. hot surfaces such as stoves, heaters, irons, etc.; matches and smoking materials; electrical appliances and systems; etc. - which must be used/designed with understanding and respect.

Fuels - e.g. flammable liquids, home furnishings and contents, construction and finishing materials and products, etc. - the hazards of which can and must be understood and addressed through informing consumers, and appropriate practices on the part of producers, designers, fire and code officials, sellers, builders, installers, users, etc.

Similarly, the severity or outcome of a fire once started depends on a number of factors, most of which people could control themselves, again if only they believed it in their interest to do so. For example, there are many measures which can reduce a person's vulnerability to fire either by stopping/slowing fire growth or by separating the people from the heat and smoke of fire. Options here include............

Behavior - e.g. preplanning, escape and refuge strategies, etc. - which could readily be changed through education and training.

Fire protection devices/systems such as...

Smoke/early warning detectors to sense fire as soon as possible and sound the alarm,

Quick response sprinklers to quickly put out the fire or at least greatly slow the rate of spread of life-threatening conditions,

Improved material/product fire performance to prevent, forestall or reduce hazardous conditions of fire and smoke,

Designs to contain or delay fire development or to facilitate escape or rescue.

These are all well-known and "common-sense" steps, so what is the role of research? The answer lies in understanding why these things are not done routinely. Generally, fire safety decisions involve trade-offs or compromises on desired levels of cost, function and safety. Bad fire safety decisions are made usually because people aren't adequately informed and convinced of the facts. In many cases, the means just have not been available for so doing. As a result we have both high fire losses and high costs of fire protection. Fire research is providing the requisite knowledge and practices to reduce both - the losses and costs.

THE ROLE OF THE FIRE RESEARCH COMMUNITY: PAST, PRESENT, FUTURE

Earlier, I asserted that fire research already has stimulated significant progress in combatting the home fire problem. These include efforts aimed at reducing the likelihood of fire, its severity, and both as noted below:

Reduce Likelihood of Fire

Test methods and standards for cigarette ignition resistance of mattresses, which have resulted in greatly reducing loss of life to fire, particularly among the elderly in "care" facilities,

Research on smoldering (e.g. cigarette) ignition resistance of upholstered furniture formed the basis for an industry-sponsored voluntary program which has notably impacted losses from such fires within the last five years or so,

Reduce Severity of Fire

Compartmentation and fire resistance ratings which resulted in a narrowing of the scope of the fire problem from urban conflagrations to typically single home or building fires,

Effective and low-cost smoke detectors which are now operating in over two-thirds of the nation's homes and many hotels, motels, and institutional facilities in the country and are often credited with a major role in reported reductions in fire deaths over the last decade,

Most recently, quick-response sprinklers developed by industry under USFA leadership offer the promise of substantial additional reductions in loss of life (the CFR role here has been limited to measurement and evaluation methods),

Reduce Both Likelihood and Severity

Children's sleepwear standards which for all practical purposes have eliminated what just over a decade ago was one of the most awful fire scenarios involving infants and children,

Studies and tests for wood/solid fueled stoves and heaters, fireplaces and related inserts, chimneys, etc., have contributed to halting the alarming upward trend of fires involving these items in both urban and rural low-income dwellings.

These successes are based on the technical foundation prepared by the work of the Center for Fire Research at NBS, our grantees, and our colleagues in the private sector - e.g. Underwriters Laboratory, Factory Mutual Research Corporation, and material and product manufacturers too numerous to name. These efforts often support and/or are coordinated with the United States Fire Administration (USFA), the Consumer Product Safety Commission (CPSC), and other public sector agencies and private sector groups such as the National Fire Protection Association (NFPA), the American Society for Testing and Materials (ASTM), and many trade and professional groups.

The technical work includes research efforts 1) to improve knowledge and technology, and 2) to provide better data and tools for fire risk evaluation and decision-making for the ultimate user. This type of technical information is essential - for example, to the USFA or NFPA - in preparing credible public education and promotional campaigns as well as sound, acceptable consensus standards and codes. Two well known examples of public information programs are the NFPA, "Learn not to Burn" campaign and the slide/film program, "Flashover, Point of No Return". Both of these have been based on well researched and documented scientific knowledge.

Another example involves smoke detectors. In this case full-scale and demonstration programs were conducted along with studies of human response and cost-benefit studies which laid the foundation for credible public education and promotional campaigns by the fire services, public service and industry groups.

Quick response sprinklers provide a more recent example. Laboratory tests were conducted by government and industry, followed by cooperative full-scale field tests, and demonstrations. Subsequently, the CFR has completed detailed estimates of the potential impact of this technology on "margins of safety" and of the cost-effectiveness of sprinklers and smoke detectors in the home. This research has helped determine the practical limitations of current systems and designs and suggested opportunities for further improvement.

Fire Safety Evaluation Systems (FSES) have led to substantial savings in costs of fire protection by helping designers demonstrate which alternatives to prescriptive code solutions maintain required levels of safety. FSES's for health care facilities, board and care homes, and detention and correctional facilities have been developed and now are incorporated in the NFPA Life Safety Code.

However, the new breed of fire risk and hazard models offers the potential of even greater impacts on both the likelihood and severity of home fires. These new tools are providing for the first time, practical means for quantitative evaluation of fire risk and hazard. The implications for the residential fire problem are enormous.

Over the last decade fire research has focussed on the fundamentals of ignition, flame spread, fire growth and smoke movement and means to model these complex phenomena as they occur within buildings. Advances in applied mathematics and electronic computing, and advances in measurement and sensing technology have enabled this progress. As a result we have begun developing models of fire growth and smoke movement within prescribed facilities - e.g. homes, buildings, ships, planes, etc. - that until recently were considered by many as "impossible." These models enable analysis of literally thousands of cases which heretofore could only be examined one-at-a-time in costly full-scale fire tests that revealed only "what" would happen and only occasionally "why".

Fire growth and smoke movement models already are addressing important problems. For example, just this year we (CFR) used the fire and smoke transport (FAST) model to advise the Architect of the Capitol on the vulnerability of the Longworth House Office Building to the hazards of smoke from a fire in one office. Similar studies have been done for the National Parks Service (involving vulnerability of occupants to fire in the St. Louis Arch Museum), and the Navy (smoke movement in ships). A consulting fire protection engineering firm is now offering a wide range of fire modeling services and many other leading firms are moving to establish the same capabilities. An American Iron and Steel Institute (AISI)-sponsored project has resulted in the first comprehensive computer-based structural fire safety model. Full-scale validation tests of it were conducted at the CFR/NBS in 1981. Now it is being accepted by leading building officials. Underwriters Laboratories is beginning to offer modeling capabilities in conjunction with its historic testing services. The Society of Fire Protection Engineers is now distributing fire model software developed at CFR and is conducting seminars on the use of these models. The American Society of Heating Refrigerating and Air Conditioning Engineers has published a Smoke Control Handbook based on a computer-based model (developed by CFR) for evaluating the performance of these systems. The ASTM has established a fire modeling committee to guide its efforts in this field.

In the twelve months since CFR's FAST program was released dozens of copies have been distributed to a broad spectrum of users private and public and mostly involved in practical work in fire safety. A number of these uses have involved litigation, others design, still others in marketing of products and services.

In response to this rapid expansion of demand for such models the CFR has taken several steps. First, we have established a Fire Simulation Laboratory to facilitate the transfer of this technology to private and public sector users. The lab is a place where one can learn what these models can and cannot do; where users can gain the background needed to later, on their own resources adapt or modify these models to a wide range of applications; where we researchers can learn better of the needs of the various users and identify needed further research and thus accelerate the development of practical tools for them. Also, we are developing a pilot-scale database for use with many of these models, and for providing guidance to private sector groups that will commercialize, support, and maintain the many services based on these models.

Current research programs seek to broaden and deepen our knowledge for such fire and risk models. For example, the current generation of models does not adequately address "simple"-sounding things like wall burning. In the last year we have introduced a version of the FAST model that for the first time handles multi-story buildings - if only in a limited way. Last year we ran an extensive series of full-scale validation tests of the single-story version of this model. Now we are working on a series of research and validation tests in a "townhouse" facility in our labs. This series will provide badly needed data and verification of smoke movement up stairs/stairwells which represent a "blind spot" in our current means for evaluating fire safety in this important category of housing.

Current fire models cannot simulate the effects of sprinklers or advanced suppression systems. The reason is simple. We don't yet know enough about "how" water puts out fire. Incredible? Yes, but true and very important if we are to expect development of affordable sprinkler technology for all housing or assure ourselves that the systems being designed provide the protection desired. This is not always obvious or simple.

Fire hazard models are only now beginning to find application in litigation, in fire investigations and simulation fire re-creations. As these uses expand the need will arise for benchmark fire models for assessing the performance and limitations of commercial computer fire codes. Work on such a reference fire code is in progress at CFR.

Also, we are now working on "Expert Systems" which will knit together fire models and expert knowledge of fire into powerful new quantitative fire safety evaluation tools.

Fire risk models seek to predict both the likelihood and consequences of fire. These models depend on adequate fire incident and behavioral data along with detailed knowledge of the chemistry and physics of fire. Probably the most advanced risk models deal with nuclear power plant safety. This technology is now being adapted to the residential fire problem. The fire research community should place its principal emphasis over the next few years on improving means of estimating the likelihood of specific fire scenarios. Our fire hazard and risk work is being coordinated with private and professional groups such as SFPE, ASHRAE, NFPA, and ASTM and others who will have key roles in the deployment, maintenance, and use of the results.

Over the last few years, an exciting spirit of cooperation and commitment to the further development, refinement, and deployment of these powerful new tools has drawn the fire research community together in what is now called the National Fire Research Strategy Conference (NFRSC). The Conference was conceived as a continuing forum for fire researchers and those who apply the products of it. In July of this year over 120 leaders in the fire safety community met at the National Bureau of Standards for three days to analyze fire research needs now and for the future. The meeting was co-sponsored by NFPA and NBS. We were honored by the participation of this Subcommittee's Chairman Doug Walgren and the Ranking Minority, Sherwood Boehlert. Together, they urged the fire community to coordinate its efforts in bringing the fruits of fire research to bear on the problem. Working groups addressed needs perceived from various perspectives - regulations and risk, fire services, investigation and litigation, personal firesafety and survival, design and engineering, and materials and products. The overview group noted a consensus among participants on the importance of coordinated efforts particularly in the areas of fire risk prediction, fire modeling, and the translation of fire research results into terms meaningful to the ultimate user. The CFR is recognized as the focal point for the NFRSC and we have agreed to provide the Secretariat for it. The NFRSC steering committee was charged with drafting a National Strategy for Fire Research that knits together the future efforts of the key organizations in the field in these areas and outline steps for implementing the Conference's many recommendations. (The strategy document will be drafted within the next few months and will then be circulated widely for review and public comment.)

CONCLUSION

Thank you Mr. Chairman, I will be happy to answer any questions.

Dr. Jack E. Snell
Director, Center for Fire Research

Jack Snell was appointed Director of the Center for Fire Research in October 1981. He is responsible for the fire research programs of the National Bureau of Standards. These include basic and applied research on all aspects of fire and development of scientific and technical knowledge applicable to the reduction of fire losses and the costs of fire protection.

Prior to his present assignment, Dr. Snell was Director of the Office of Energy Programs and had responsibility for the energy-related programs in the Bureau's National Engineering Laboratory. Dr. Snell joined the National Bureau of Standards in August 1971 as Chief of a research group in the Building Environment Division, Center for Building Technology, which developed performance criteria and measurement technology for building service systems.

Prior to his service with the Bureau, Dr. Snell was Assistant Professor of Transportation Engineering and Director of the Transportation and Urban Systems Laboratory at Princeton University. His previous work experience includes wind tunnel testing on high-lift devices for aircraft, military duty in the Strategic Air Command, and aircraft maintenance engineering with a major international airline. Following his graduate study, Dr. Snell taught in Kanpur, India, at the Indian Institute of Technology for 18 months.

He received a Bachelor's Degree (honors) in Aeronautical Engineering from Princeton University in 1957, a Master's Degree in Industrial Engineering/Operations Research in 1964, and a Ph.D. in Civil Engineering (Transportation) in 1966 from Northwestern University.

His major interest is in the field of research management and program development where he has authored numerous papers and articles and is a frequent speaker.

Dr. Snell has received the Department of Commerce Silver Medal, and numerous citations. He is a member of the National Fire Protection Association, the State of Maryland Governor's Science Advisory Council, the American Society of Mechanical Engineers, the American Society for Testing and Materials, and the International Platform Association.

Mr. BROWN. Thank you very much, Dr. Snell. Your testimony is very helpful.

Mr. Scanlon, would you proceed with your statement?

STATEMENT OF TERRENCE SCANLON, CHAIRMAN, CONSUMER PRODUCT SAFETY COMMISSION

Mr. SCANLON. Thank you, Mr. Chairman, other members of the subcommittee, and staff. This being National Fire Prevention Week, I am particularly pleased to join Clyde Bragdon and Jack Snell this morning on this panel and to have the opportunity to discuss what the U.S. Consumer Product Safety Commission is doing to reduce the number of fatalities resulting from residential fires. The fact that fire is the second most frequent cause of accidental death in the home underscores the seriousness of the problem. However, there is much that can be done, much in fact that has been done to address it.

A few statistics help provide some perspective. According to the latest estimates, there were more than 800,000 structural fires last year and there are 5,000 deaths resulting from fire in this country each year. In 1984 over 620,000 of these fires occurred in residences and some 4,300 people, or roughly 85 percent of the entire fatality total, died as a consequence. Needless to say, this is a terrible toll, but the good news is, it is declining. Just 5 short years ago, 5,500 people were dying in residential fires each year, 20 percent more than today.

Many organizations and many people, both professional and volunteer, are responsible for the recent drop in home fire fatalities. However, I would just like to take a few moments to outline for the subcommittee what the Consumer Product Safety Commission has done, is doing, and plans to do to reduce residential fires.

First, what we have done: In point of fact the Commission has been active in the field of fire prevention ever since its inception in 1973. For instance, in its very first year the Commission adopted a standard design to keep mattresses from catching on fire due to lighted cigarettes. Today, thanks to that standard, virtually every mattress produced is resistant to cigarette ignition.

In addition to the mattress standard, the Commission has, one, enforced two flammability standards for children's sleepwear; two, encouraged the revision of voluntary standards governing television receivers, kerosene heaters, electric blankets, and quartz heaters; three, brought about changes in the National Electrical Code as it relates to electrical extension cords; and, four, adopted a mandatory labeling rule for wood- and coal-burning stoves.

Moving from the past to the present, the Commission has several other fire-related voluntary standard projects underway. Perhaps the most notable and certainly one of the most successful has been the one dealing with upholstered furniture. Prior to a voluntary standard being adopted in the early seventies, only 15 percent of the upholstered furniture on the market resisted catching fire when exposed to a lit cigarette. Today, that percentage is more than four times as high. Moreover, cigarette-ignited furniture fires declined 40 percent from 1980 to 1983, and the number of deaths resulting from these fires was down 25 percent.

Complementing this effort are three other ongoing voluntary standard projects, all dealing with home heaters. The first, dealing with portable electric heaters, will be a CPSC priority project in fiscal 1986, just as it has been in 1985. Its object will be to evaluate the adequacy of such things as plugs, tipover switches, thermostats, limit controls, and heating elements to see if the existing voluntary standard—the U.L. 1025—requires revision.

The second, involving kerosene heater flareup and nitrogen dioxide emissions, follows a comprehensive Commission investigation of kerosene heaters in both 1983 and 1984 which resulted in four major improvements: New guards and grills, inclusion of a manually operated emergency shutoff device, the addition of a wick stop mechanism, and improved safety labels for the heaters themselves.

Finally there is the matter of woodburning equipment. In this area, the Commission is working with Underwriters Labs, the National Fire Protection Association, the Wood Heating Alliance, the National Chimney Sweep Guild, and the American Society for Testing and Materials—ASTM—on problems related to the insulation and safe performance of chimneys and fireplace inserts.

Of course, the establishment of standards, be they voluntary or mandatory, is not the only weapon the Commission has at its disposal to fight residential fires. Also in the arsenal is the information and education campaign, and in the area of fire safety, we have pushed a number of these quite effectively. Mr. Chairman, in order to save time, I would like to submit many of these on a myriad of subjects to you for your permanent record.

Mr. BROWN. We would appreciate that.

Mr. SCANLON. These would include two PSA's that we have had, and have had wide distribution.

For instance, the CPSC has been highly successful in encouraging consumers to install and/or maintain early-warning smoke detectors in their homes. We have worked closely with the U.S. Fire Administration at FEMA and the various fire service organizations across the country with these efforts.

Spurred on by the knowledge that the risk of dying in a residential fire is twice as high if the home is not equipped with a smoke detector, the Commission made smoke detector installation a priority project in fiscal 1983 and an ongoing effort in both 1984 and 1985. In addition to ordering recalls when defective smoke detectors were uncovered, the Commission enlisted the support of the media, consumer organizations, businesses, 26 States, and over 2,200 local governments, in conducting smoke detector information programs, giveaway projects, and sell-at-cost campaigns. Also, the Commission has encouraged State and local communities to either enact residential smoke detector legislation or strengthen existing codes.

We conservatively estimate that these efforts resulted in 1.5 million smoke detectors being made available and over 3 million pieces of materials containing CPSC smoke detector information being reproduced and distributed. In addition, the number of States with residential smoke detector legislation on the books has increased from 31 to 48, and over 100 local jurisdictions enacted their own regulations.

Noteworthy also is the fact that smoke detectors were incorporated in a major way into the Commission's "Safety for Older Consumers" project, which was a priority project in fiscal 1985 and will be again in fiscal 1987. The centerpiece of this project is a home safety checklist which we, at the CPSC, have been getting into the hands of senior citizens by a wide variety of means. Approximately 1 million of these checklists which, among other things, encourage the installation and upkeep of smoke detectors, have been distributed already and we are getting 1 million more printed.

Based on the reaction so far, there is even reason to believe more and more seniors, who are at least twice as vulnerable to residential fires than the population at large, will be equipping their homes with functional smoke detectors. In fact, in Philadelphia, where the Commission conducted a highly successful pilot study of this "Safety for Older Consumers" program, that program is now known as the "Home Safety Fire Prevention Program."

Just so that you have a complete picture, I should point out that the Commission has likewise conducted information and education campaigns on electrical safety and on supplemental home heating equipment such as kerosene heaters and wood stoves. In fact, both of these campaigns are still underway.

With regard to what we at the Consumer Product Safety Commission will be doing in the future to combat residential fires, let me stress two things: fire toxicity and cigarette safety.

Fire toxicity has been a priority project at the Commission for the past 2 years and will continue to be a priority through fiscal year 1987. Currently the CPSC is investigating the toxic combustion products generated when consumer products burn. We are also cosponsoring a state-of-the-science study on fire combustion toxicity by the National Academy of Sciences, and have organized a Federal agency task group to share expertise in this area. We intend to apply this knowledge and information on other fire characteristics such as ignition, flame spread, and heat release, to fire hazard mathematical models. These models will allow us to determine whether changes to materials using consumer products can reduce the number of fire-related deaths.

To carry on this work, the Commission has budgeted approximately $600,000 for fiscal 1986 and is likely to spend at least $450,000 more the following year. Inasmuch as two-thirds of all who perish in residential fires die from toxic smoke and fumes, this to me is money well spent.

Moving on to cigarette safety, I am happy to report that considerable progress has been made since Congress adopted the Cigarette Safety Act in 1984. As you will recall, that legislation authorized a 30-month study, costing an estimated $2.7 million, to identify or develop cigarettes and little cigars which have a lesser tendency to ignite furniture or mattresses.

This study is being conducted not by the Commission alone but under the auspices of an interagency committee of which I am the chairman. Other agencies participating are the Department of Health and Human Services and the U.S. Fire Administration of FEMA. So far the technical study group that has been established to carry out this study has met on six occasions and actual testing is now underway at the Center for Fire Research at NBS. If these tests bear fruit and a cigarette with different ignition characteristics is the result, nearly 1,600 lives per year could potentially be saved.

In closing, Mr. Chairman, let me just make one final point. As the agency with jurisdiction over many products that can either ignite or contribute to residential fires, the CPSC is taking its responsibility with respect to such fires very seriously. Regardless of the progress that has been made, there is more that can and should be done, be it encouraging people to install or maintain smoke detectors, discouraging people from using gasoline and kerosene heaters, promoting safety improvements in supplementary heating systems, or learning more about the very nature of residential fires. While fewer than before, 4,300 deaths per year from residential fires is still too many.

Thank you very much.

[The prepared statement of Mr. Scanlon follows:]

U.S. CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, D.C. 20207

TESTIMONY OF

TERRENCE SCANLON, CHAIRMAN

U. S. CONSUMER PRODUCT SAFETY COMMISSION

TO THE

SUBCOMMITTEE ON SCIENCE, RESEARCH AND TECHNOLOGY

COMMITTEE ON SCIENCE AND TECHNOLOGY

U. S. HOUSE OF REPRESENTATIVES

OCTOBER 9, 1985

Mr. Chairman, Members of the Subcommittee, Ladies and Gentlemen.

This being National Fire Prevention Week, I am particularly pleased to have the opportunity this morning to discuss what the U. S. Consumer Product Safety Commission is doing to reduce the number of fatalities resulting from residential fires. The fact that fire is the second most frequent cause of accidental death in the home underscores the seriousness of the problem. However, there is much that can be done — much in fact that has been done — to address it.

A few statistics help provide some perspective. According to the latest estimates, there were more than 800,000 structural fires last year and there are 5,000 deaths resulting from fire in this country each year. In 1984, over 620,000 of these fires occurred in residences and some 4,300 people — or roughly 85% of the entire fatality total — died as a consequence. Needless to say, this is a terrible toll but the good news is, it is declining. Just five short years ago, 5,500 people were dying in residential fires each year, 20% more than today.

Many organizations and many people, both professional and volunteer, are reponsible for the recent drop in home fire fatalities. However, I'd just like to take a few minutes to outline, for the Subcommittee, what the Consumer Product Safety Commission has done, is doing, and plans to do to reduce residential fires.

First, what we have done. In point of fact, the Commission has been active in the field of fire prevention ever since its inception back in 1973. For instance, in its very first year, the CPSC adopted a standard designed to keep mattresses from catching on fire due to lighted cigarettes. Today, thanks to that standard, virtually every mattress produced is resistant to cigarette ignition.

In addition to the mattress standard, the Commission has:

(1) enforced two flammability standards for children's sleepwear

(2) encouraged the revision of voluntary standards governing television receivers, kerosene heaters, electric blankets and quartz heaters

(3) brought about changes in the National Electrical Code as it relates to electrical extension cords

(4) adopted a mandatory labeling rule for wood and coal burning stoves.

Moving from the past to the present, the Commission has several other fire-related voluntary standards projects underway. Perhaps the most notable, and certainly one of the more successful, has been the one dealing with upholstered furniture. Prior to a voluntary standard being adopted in the early 1970's, only 15% of the upholstered furniture on the market resisted catching fire when exposed to a lighted cigarette. Today, that percentage is more than four times as high. Moreover, cigarette ignited furniture fires declined 40% from 1980 to 1983 and the number of deaths resulting from these fires was down 25%.

Complementing this effort are three other, ongoing voluntary standards projects, all dealing with home heaters. The first, dealing with portable electric heaters, will be a CPSC priority project in fiscal 1986 just as it was in fiscal 1985. Its object will be to evaluate the adequacy of such things as plugs, tip-over switches, thermostats, limit controls and heating elements to see if the existing voluntary standard - UL 1025 - needs to be revised. The second, involving kerosene heater flare up and nitrogen dioxide emissions, follows a comprehensive Commission investigation of kerosene heaters in 1983 and 1984 which resulted in four major improvements: new guards and grills, inclusion of a manually operated emergency shut-off device, the addition of a wick-stop mechanism and improved safety labels for kerosene heaters. And finally there is the matter of woodburning equipment. In this area, the Commission is working with Underwriters Laboratories, the National Fire Protection Association, the Wood Heating Alliance, the National Chimney Sweep Guild and the American Society for Testing and Materials (ASTM) on problems relating to the installation and safe performance of chimneys and fireplace inserts.

Of course, the establishment of standards, be they voluntary or mandatory, is not the only weapon the Commission has at its disposal to fight residential fires. Also in the arsenal is the information and education campaign and, in the area of fire safety, we have pushed a number of these quite effectively.

For instance, the CPSC has been highly successful in encouraging consumers to install and/or maintain early warning smoke detectors in their homes. Spurred on by the knowledge that the risk of dying in a residential fire is twice as high if the home is not equipped with a smoke detector, the CPSC made smoke detector installation a priority project in fiscal 1983 and an ongoing effort in 1984 and 1985. In addition to ordering recalls when defective smoke detectors were uncovered, the Commission enlisted the support of the media, consumer organizations, businesses, 26 states and over 2,200 local governments in conducting smoke detector information programs, give-away projects and sell-at-cost campaigns. Also, the Commission has encouraged states and local communities to either enact residential smoke detector legislation or to strengthen existing codes. We conservatively estimate that these efforts resulted in 1.5 million smoke detectors being made available and over 3 million pieces of materials containing CPSC smoke detector information being reproduced and distributed. In addition, the number of states with residential smoke detector legislation on the books has increased from 31 to 48 and over 100 local jurisdictions enacted their own regulations.

Noteworthy also is the fact that smoke detectors were incorporated, in a major way, into the Commission's Safety for Older Consumers project which was a priority project in fiscal 1985 and will be again in fiscal 1987. The centerpiece of this project is a home safety checklist which we, at the CPSC, have been getting into the hands of senior citizens by a wide variety of means. Approximately one million of these checklists, which, among other things, encourage the installation and upkeep of smoke detectors, have been distributed already and we are getting a million more printed. Based on the reaction so far, there is every reason to believe more and more seniors, who are at least twice as vulnerable to residential fires than the population at large, will be equipping their homes with functional smoke detectors. In fact, in Philadelphia, where the Commission conducted a highly successful pilot study of the Safety for Older Consumers program, that program is now known as the Home Safety Fire Prevention Program.

Just so you have a complete picture, I should point out that the CPSC has likewise conducted information and education campaigns on electrical safety and on supplemental home heating equipment, such as kerosene heaters and wood stoves. In fact, both of these campaigns are still underway.

With regard to what we, at the Consumer Product Safety Commission, will be doing in the future to combat residential fires, let me stress two things: fire toxicity and cigarette safety.

Fire toxicity has been a priority project at the Commission for the past two years and will continue to be a priority through fiscal year 1987. Currently, the CPSC is investigating the toxic combustion products generated when consumer products burn. We are also co-sponsoring a state-of-the-science study on fire combustion toxicity by the National Academy of Sciences and have organized a Federal agency task group to share expertise in this area. We intend to apply this knowledge, and information on other fire characteristics such as ignition, flame spread and heat release to fire hazard mathematical models. These models will allow us to determine whether changes to materials used in consumer products can reduce the number of fire related deaths.

To carry on this work, the Commission has budgeted approximately $600,000 for fiscal 1986 and is likely to spend at least $450,000 more the following year. Inasmuch as two thirds of all who perish in residential fires die from toxic smoke and fumes, this to me is money well spent.

Moving on to cigarette safety, I am happy to report that considerable progress has been made since Congress adopted the [redacted] As you will recall, that legislation [redacted] This study is being conducted, not by the CPSC alone, but under the auspices of an interagency committee, of which I am the Chairman. Other agencies participating are the Department of Health and Human Services and the U. S. Fire Administration of the Federal Emergency Management Agency. So far, the Technical Study Group that has been established to carry out this study has met on six occasions and actual testing is now underway at the Center for Fire Research, National Bureau of Standards. If these tests bear fruit, and a cigarette with different ignition characteristics is the result, nearly 1,600 lives per year could potentially be saved.

In closing, Mr. Chairman, let me just make one final point. As the agency with jurisdiction over many products that can either ignite or contribute to residential fires, the Consumer Product Safety Commission is taking its responsibility with respect to such fires very seriously. Regardless of the progress that has been made, there is more that can and should be done, be it encouraging people to install or maintain smoke detectors, discouraging people from using gasoline in kerosene heaters, promoting safety improvements in supplementary heating systems or learning more about the very nature of residential fires. While fewer than before, 4,300 deaths per year from residential fires is still too many.

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Mr. **Brown**. Thank you very much, Mr. Scanlon.

We appreciate the picture that all of you gentlemen have given us about the progress that is being made in reducing fire deaths. A 20-percent reduction over the recent peak seems to be an impressive showing, and the fact that we can point to the reduction in fires caused by cigarettes in furniture and the deaths caused from that is also significant.

The question comes to me, which I would ask you to comment on, to what degree do we have the statistical base which allows us to determine what is the most effective of the strategies that we are using? For example, it's clear we must identify fires caused by cigarettes in furniture, or you couldn't cite the kind of statistics that you have. Do we have the analytical capability to make similar kinds of determinations roughly or well? What's the status of the situation?

Mr. **Bragdon**. If I may, sir, the data gathering systems that are used primarily in the fire community are those developed by the National Fire Protection Association and the National Fire Information Reporting System, of which there are 31 member States and individual communities in other States. When you take those two data systems and balance them against each other, I think we do get a fairly accurate, valid, and significant data base from which we can direct our efforts.

For example, we have given you fairly definitive information relative to residential fires, which is the emphasis of your hearing, and what the target groups are and where those fires are occurring. From that kind of data, of course, CPSC has indicated some of the direction of their particular efforts. One that we have opted on and which I spoke to certainly was that we feel the greatest impact can be made in the shortest period of time through public awareness and public education, but we are satisfied and comfortable that the information that we have now, which in fact is becoming more sophisticated all the time, does give us appropriate kinds of direction.

Mr. **Brown**. Dr. Snell, you have had a background in operations research and analysis. Do you feel that this fire reporting system is adequate as a base for analysis of the fire problem or could it be improved upon?

Dr. **Snell**. I agree with Mr. Bragdon that the system as it exists provides a good picture of what the major causes of fire are and where they occur. There are areas where our more detailed knowledge is very skimpy and in which specialized studies based on these data and some further data would be particularly helpful.

Smoke toxicity is a good case in point. Members of the fire service are very concerned about the extent to which the hazard they confront in a burning fire now seems different to them than it used to be. It's hard for us to characterize just how different it is. We don't have really good information about how people die in fire. We know that most people who die in fire are felled by smoke, but how they die and the mechanisms as it relates to what can be done in terms of material regulation or product development and so forth, some of those links aren't there. So the data base that we have now is probably the best, one of the very best in the world in terms of the causes and sources of fire. Certainly we could and, through the programs of the fire administration and others, are doing such specialized studies.

Mr. BROWN. Well, for some of the cases you have cited, you don't need a comprehensive data base. You need a good case system analysis——

Dr. SNELL. That is correct.

Mr. BROWN [continuing]. Which is a somewhat different thing. Mr. Boehlert, do you have any questions?

Mr. BOEHLERT. Yes; from Mr. Bragdon. I would like to ask about your cooperative effort with other Federal agencies. Could you expand upon that a little bit.

Mr. BRAGDON. Obviously, by the three of us being present you can see that each one of us has statutory responsibility to address some of the fire problems that occur in this country. I think that's certainly a point of emphasis, that we do work very closely with those other Federal agencies that have fire responsibilities. I think I would be remiss in not stating that that was probably not always true in the past, and we are trying to further enhance that relationship. The Center for Fire Research is really our brother creature under the same Fire Act, and I think in the last year or so we have had more meaningful dialog and are working closer together in programs, up to and including that we are passing through much of our funding for research efforts to be carried out by the Center for Fire Research.

I strongly believe that the Federal Government—even though there may be others that do not—should have the independent effort that is provided by that particular center. Most other fire research does have some bias associated with it. We are also having that same kind of meaningful dialog with the Consumer Product Safety Commission. What can become apparent, of course, is that we could have some duplicate or redundant effort, and we are trying our best to avoid that occurring.

The National Wildfire Coordinating Group, which is all your wild land fire agencies at the Federal level, the Department of the Interior and the Department of Agriculture being the two prime members in conjunction with the State foresters, we are represented as a member in that particular group. The Federal Fire Council is a group of the military leadership, civilian for the most part, in the Federal Fire Service and so forth. We are a party and used to be the support base for that organization. However, staffing no longer permits us to do that. We are the sponsors of the Federal Arson Task Force which, together with the law enforcement agencies at the Federal level, works on that particular emphasis. We are working closely with the Coast Guard, the National Institute of Occupational Safety and Health, and NASA on the development of equipment, safety equipment, for the firefighters of our country, so we are working in concert closely with the other Federal agencies. I say, I agree those relationships can be enhanced.

Mr. BOEHLERT. I'm glad to hear that because so often I think the public perception is that the right hand doesn't know what the left hand is doing, and there isn't the coordination that we require, and I'm glad you put in a plug for CFR. Whenever I think of CFR, I always think of a good news/bad news story. The bad news is that the next budget presentation will probably do what past budget presentations have done, recommend cutting of funding. The good news is that we won't let that happen in the Congress. Dr. Snell, I'm sure that makes you happy.

I would ask a question of all three of you. Is this mike working? Is it working all right?

Mr. **Bragdon**. I can hear you. I don't know if your mike is working, though.

Mr. **Boehlert**. All right. I'll speak loudly.

I'm just going through a very interesting experience right now. Everyone should experience it at least once in a lifetime. I'm building a new home. I'm not doing it. A contractor is doing it, but an interesting thing from my point of view is that no one in that process—they tell me about adding square feet for a family room and three fireplaces and all these other things that I should do to make my home the dream home of the future—but no one has talked to me about any security systems relating to fire or any other activity. Fortunately, I am enlightened as a result of my membership on this committee and I am installing a rather comprehensive system, a heat detector and all that sort of thing.

Do you have any relationship with the National Association of Homebuilders? I mean, it just seems to me, Mr. Scanlon, that that is a logical thing when someone is talking about building a new home, that in addition to telling you about all this square footage and everything else you should be looking for in your dream house, they ought to be thinking and focusing on the safety aspect and encouraging people like me to install the type of equipment we hear about at a hearing like this.

Mr. **Scanlon**. That's a good question, Mr. Boehlert. We have many discussions with various building codes groups where we discuss a myriad of safety issues, not just smoke detectors but sprinkling systems and proper insulation of heating equipment, on and on. We make sure that these same building codes groups get all of our standards information, both voluntary and mandatory.

Mr. **Boehlert**. And you're doing a good job on that, if I may just interrupt a moment. I was glad when Mr. Bragdon talked about Ogilvy and Mather. They retain a public relations firm. I'm a strong advocate of that. But in concert with the National Association of Homebuilders, couldn't your organization develop some sort of packet, informational packet that those that belong to the National Association of Homebuilders would sign a pledge, that when they talk to a prospective homebuilder and they get the name signed on the dotted line, that they would give that informational packet?

I'll tell you quite frankly, I just don't think most of us, when we're going through the trauma of making that big decision and trying to find mortgage money and everything else, about the last thing we're thinking about is some added expense—smoke detectors, security systems, things like that—and yet it makes so much sense. You can do a very effective job, as we saw with just those three 30-second spots, in alerting the public to the importance of this. I just think that's an area where you can do a lot more. I'm not chastising anybody for inactivity. I'm just suggesting some additional activity that it seems to me wouldn't be extremely costly.

Mr. **Scanlon**. It would not be. I think your suggestion is a good one, and we'll do it.

Mr. **Boehlert**. Fine. The other thing is, I would like to ask about heat detectors. We keep talking about smoke detectors all the time, but in the home I'm getting we are going to have both smoke detectors and heat detectors. I didn't go all the way for the sprinkler system, but could you talk about smoke detectors versus heat detectors? Should you have both? Am I correct, where there is smoke, there is heat? Sort of address the subject in general, if you will.

Mr. **Bragdon**. The scientific point of view: Dr. Snell.

Dr. **Snell**. One of the fire scenarios of greatest concern involves cigarettes or smoking materials, upholstered furniture or bedding. Well, it shouldn't involve bedding anymore because, as you have heard now, the standard is there in terms of mattresses. Cellulosic materials—cotton, for example—will smolder from a cigarette, a lot of smoke, and over a period of a few hours you can get enough to be fatal, particularly if you are in a confined space as some in a closed room may be. So the scenario of people incapacitated, involved with smoking materials, bedding or upholstered furnishings, at night or what have you, is one that has a very significant role in the overall loss of life to fire, and your heat detector won't know that's going on. There is a case where the smoke detector provides a unique function.

Second, when you think about rapidly developing fire, the communication of the combustion products to distant parts of the house is felt first by the smoke. Yes, there is a great deal of heat released as the initial item burning goes up in flame, but a great deal of that heat is lost to the walls and the surrounding furnishings near the fire, so it's the smoke that gets out to the extremities of the occupancy before the heat. So I don't think we can understate the importance of smoke detectors. Heat detectors in the home do not represent a safe alternative to smoke detectors. There are instances——

Mr. **Boehlert**. Is there a need for both?

Dr. **Snell**. I think that depends.

Mr. **Boehlert**. I'd better call my builder in a hurry.

Dr. **Snell**. Our folks would be happy to address the specifics of where a heat detector may be needed in addition. The main problem has been getting the message out about smoke detectors in the first instance.

Mr. **Boehlert**. Mr. Bragdon, if I may ask, do you have a contract with Ogilvy and Mather? They are not doing it on a pro bono basis, are they? It's not a public service activity?

Mr. **Bragdon**. No; it's a fairly extensive contract. It encompasses all of the initiatives that we are currently carrying within the Fire Administration.

Mr. **Boehlert**. Let me compliment you for doing that because I tend to think there is a perception in the public mind that when you're spending money for public relations activities, you're wasting it, and I think you're spending money very effectively with a top-notch professional firm like that that can help you get the message you want across to the American people.

Mr. **Bragdon**. If I may back up to a previous question you asked, we currently have in our second year a contract with the National

Association of Homebuilders to conduct a cost study analysis, and this cost-benefit study is to explore if there are any appropriate trade-offs—and I have to give emphasis to that word appropriate, because certainly in the housing industry cost is a primary concern and fact when we think of it overall in housing, and of course the cost of housing being so significant nowadays, that any addition is considered by the homebuilding industry as maybe something that has to be closely scrutinized. But this cost-benefit study that they are conducting is to attempt to convince their membership that the need to offer residential sprinklers as an option or an alternative can be cost-effective. We are in the second year of that effort, so we are working with that industry, and obviously at this time they have not come forward with any conclusion.

Mr. **Boehlert**. Thank you all. Dr. Snell?

Dr. **Snell**. There is another aspect, I think, of this situation with the homebuilders that may offer promise for the future. One of the most exciting developments of that field, at least that has captivated the homebuilding industry, is the so-called smart house which will take full advantage of developments in electronic technology and automation and so forth. When we think about that, we think about a house that's getting to be a fairly complicated piece of equipment. You know, in the past you used to be able to buy a car and take it out and drive it without reading the manual. Increasingly, that's getting to be impossible. In fact, we may soon find ourselves going to short training courses by car salesmen to figure out how to work the thing. It's not at all unreasonable to think about responsibility of homebuilders and sellers to develop ways to communicate to buyers how to use and effectively and safely maintain and operate their homes.

Mr. **Boehlert**. I want to thank all three of you for what I feel is very excellent testimony. Mr. Scanlon particularly, I would be interested in the response you get from NAHB to your contact, and I think they will be responsive. It's probably just one of those things that people haven't thought about.

By way of explanation, I would like to point out that the rather sparse attendance on this subcommittee today is not because of any lack of interest in the subject matter. If you will look at the clock in the back of the room, you'll see all those lights up there. At this very moment the Prime Minister of Singapore is addressing a joint meeting of Congress. He is considered by many to be one of the most dynamic political leaders in the world. I can read his statement tomorrow. I am vitally interested in what you are doing here today. Thank you.

Mr. **Bragdon**. Thank you.

Mr. **Walgren**. Thank you, Mr. Boehlert.

Mr. Bragdon, on the community-based volunteer program, can you tell us anything about your experience with how that program is functioning and how much of an effort are we putting into it?

Mr. **Bragdon**. The program was implemented just shortly—excuse me—just a little more than a year ago with 1984 money, with the first 10 States and 30 demonstration projects. It has just been in the last 2 or 3 weeks, the 1985 effort, so the first-year effort, obviously the feedback is not complete. But what we have received thus far—and I made reference to three of those programs in my statement this morning—has been exemplary, so we are encouraged that that was an appropriate initiative, to create a partnership of course at the local level of government, with minimum Federal involvement, with the State providing guidance, and involvement of the local fire protection agencies, local community, and volunteer organizations.

Our ultimate objective is to take—when we have all 50 States, if we ever are able to carry the program that far—and make sure that all of these initiatives or programs are published and available through the entire communities in this country, so they have the opportunity to borrow from and use from each other. So, in response to your question, it really is premature to have much conclusion but what we have thus far is very encouraging.

Mr. WALGREN. Can you give us some measure of the level of effort? How much are we providing to each of these projects in terms of funding?

Mr. BRAGDON. The projects that reach each State, of course we do fund a State coordinating committee. That's just to cover their extraordinary out-of-pocket expenses. The Governor is responsible for appointing a coordinator and making sure he has representatives from the private and public sectors on his statewide committee, to make recommendations on the awarding of these grants, and there are three grants in each State—urban, suburban, and rural—and it's a total of $60,000. Not a significant amount of money goes to each State, certainly, and then there is of course some administrative cost in the program, which is currently being conducted by the National Governors Association.

Mr. WALGREN. I'm sorry. I didn't hear the amount.

Mr. BRAGDON. There is $60,000 to each State for the projects, $10,000 to the State itself for the administration of the program. Then the additional funds are for the conduct of the program to the National Governors Association, which has oversight responsibility.

Mr. WALGREN. I see, $60,000 to each State, $10,000 of which is used for——

Mr. BRAGDON. No; $70,000, $60,000 to the projects, $10,000 to the State. Additional to that is the administrative cost for the National Governors Association.

Mr. WALGREN. We have three projects in a State, so we are talking about something in the range of $20,000 a project on the community level. Is that right?

Mr. BRAGDON. They have the ability to split that up, but generally it's $25,000 each to the city or urban and suburban project, $10,000 to a rural project, or any combination thereof, recognizing that each State has various kinds of configurations or needs.

Mr. WALGREN. Do you know yet what they are doing with that money in general?

Mr. BRAGDON. Yes, sir. We gave some examples in testimony this morning of some of the projects that the various community-based volunteer organizations have in place.

Mr. WALGREN. You mentioned the demonstration projects for the elderly with respect to residential sprinkler programs, and you are going to try to do something in that area this coming year. What are your plans?

Mr. BRAGDON. Our target areas, of course, are going to be those target groups, and particular emphasis on the elderly. We feel it is our responsibility at the Federal level, not to be the funding agency to retrofit some of the housing market, but to provide appropriate demonstration projects. We did one by the Fire Administration in Washington, DC here, I believe about 5 years ago. Interestingly enough, last year they had a fire in that housing for elderly, and the sprinkler systems with the old technology, not the new technology, were successful in suppressing that fire, and the residents were back in that building the same evening that the fire occurred. We need to and plan to do more of those demonstration kinds of pilot projects in other major urban areas.

Mr. WALGREN. How much are we going to allocate to that effort in terms of money?

Mr. BRAGDON. Well, we have some problem this year between the House report and the Senate report in our appropriations. The House report as it now stands would redirect most of our funding for our major initiatives into specific urban projects and not give us the program or agenda that we had submitted as part of the administration's program. The Senate report corrects that and puts it back in line with the administration's request, so I really can't say at this time how the conference will address that.

Mr. WALGREN. How much had the administration been anticipating?

Mr. BRAGDON. Our residential sprinkler initiative was funded at the same level, $2.5 million, and included in that a large part of the public awareness, working on consensus codes, demonstration projects, these residential sprinkler units, the trailers that are throughout the country.

Mr. WALGREN. Is there a breakdown between the public awareness side and the demonstration project side, as a recommendation?

Mr. BRAGDON. Yes.

Mr. WALGREN. How much would that be?

Mr. BRAGDON. The retrofit, which would be a building demonstration, about $450,000 proposed, and the demonstration, which includes the public awareness and the trailer program, about $750,000.

Mr. WALGREN. I see. How many buildings can you actually retrofit with $450,000 at that point?

Mr. BRAGDON. I don't think the number was important. It's the type and nature of the building. We would like to address our concerns to that target group and also unique installations. It's not cost effective to continue to do something we have already demonstrated and proven the technology on.

Mr. WALGREN. So we're probably talking about two sites at that point. Would that be about right?

Mr. BRAGDON. Depending on the size and nature of the building, yes, sir.

Mr. WALGREN. I see.

Mr. Scanlon, if I could ask, you indicated in your testimony that the voluntary upholstery standard is now reaching about 60 percent of the furniture sold or on the market. I gather that's sold—is that right?—each year.

Mr. SCANLON. That's correct.

Mr. **Walgren**. And that shows itself to be a very, very effective program, with the number of deaths from fires involved in cigarettes and furniture declining substantially. That means about half the furniture or a little less than half that is sold each year is not conforming to that voluntary standard. If that's the case, unless I'm making a wrong assumption—please correct me if I am—wouldn't that argue strongly that we ought to be pushing that standard to higher compliance levels, and if it takes a compulsory standard at that point, doing it?

Mr. **Scanlon**. I think your basic premise is incorrect, Mr. Walgren. Let me ask Jim Hoble to come up to the table, if he would, who is an expert on the whole UFAC upholstered furniture program.

Mr. **Hoble**. Mr. Chairman, the upholstered furniture voluntary action program covers approximately 90 percent, on a dollar volume basis, of the furniture manufactured in this country. Of that 90 percent, our latest figures shown that approximately 70 percent of their product is cigarette ignition resistant, so we're talking about on the whole market, somewhat over 60 percent of the furniture will not resist cigarette ignition. This is, of course, a significant improvement over the 15 percent before the program, and they are still working on improving that.

Mr. **Walgren**. Yes, but you say 60 percent will not resist cigarette ignition.

Mr. **Hoble**. I'm sorry. Let me correct that: 70 percent.

Mr. **Walgren**. Seventy percent will not resist or will resist.

Mr. **Hoble**. Will resist.

Mr. **Walgren**. Will resist; 30 percent would not.

Mr. **Hoble**. Yes.

Mr. **Walgren**. Is that dollar volume or is that units at that point.

Mr. **Hoble**. That's on a dollar volume basis.

Mr. **Walgren**. How about units? What would the——

Mr. **Hoble**. It's approximately the same. The distribution of furniture in the program is approximately equal, from the low-dollar price lines up to the more expensive.

Mr. **Walgren**. What's holding the 30 percent back? Why can't we get that 30 percent, if we're saving lives and substantial numbers of lives as well?

Mr. **Hoble**. It's a significant technical problem, sir. The types of furniture which represent a significant problem now are those which do not contain welt cords and those which are covered with predominantly cellulosic fabrics. We are targeting our effort to those two lines right now. There is research, both within the industry and at the Commission, on that.

Mr. **Walgren**. To solve what are technical problems at that point——

Mr. **Hoble**. Yes, sir. It's a technical problem.

Mr. **Walgren** [continuing]. In applying the performance standard to those materials. Is that correct?

Mr. **Hoble**. That's correct.

Mr. **Walgren**. I see. Well, we certainly would be interested in knowing your progress in that area because it certainly seems to be important.

Mr. HOBLE. We will keep you informed.

Mr. WALGREN. Well, let me thank you all, on behalf of the subcommittee, for your testimony. We appreciate your contribution to this public discussion and hope some good can come out of it.

Mr. BRAGDON. Thank you, Mr. Chairman.

Mr. WALGREN. The next panel, representing State and local governments: Charles Henry, the State fire commissioner from my own State of Pennsylvania, along with Anthony Granito—I apologize if I mispronounce—the superintendent of the fire program for the vocational education and extension board of the County of Nassau in Long Island, NY, and Roger McGary, who is chief of the Takoma Park, MD, Volunteer Fire Department. I understand accompanying this witness is Mr. Henry Marschalk, who is a resident of Takoma Park and who has a retrofitted home, retrofitted with a sprinkler system. And Ron Darrah, who is president of the National Fire Information Council from San Diego, CA.

Welcome to the committee, gentlemen. We are pleased you could be here and appreciate your participating in this kind of a public forum, to give us your views of where we are and where we might go. Let's go in the order in which I introduced you all, starting with Chet Henry from Pennsylvania. Welcome to Washington.

STATEMENT OF CHARLES A. HENRY, STATE FIRE COMMISSIONER, COMMONWEALTH OF PENNSYLVANIA

Mr. HENRY. Thank you very much, Mr. Chairman.

First, I bring greetings from Gov. Dick Thornberg of the Commonwealth of Pennsylvania, and he also said I should extend his commendations for the high level of interest of this committee and your continuing effort to reduce the fire problem in the Nation. He also wants to extend his personal thanks for the tremendous amount of viable Federal resources provided to Pennsylvania to assist us in our efforts to reduce the fire problem in the Commonwealth.

Mr. Chairman and members of the subcommittee, good morning. My name is Chet Henry. I am the State fire commissioner for the Commonwealth of Pennsylvania and director of the office of fire safety services within the Pennsylvania Emergency Management Agency. I would like to tell you what has been done in Pennsylvania to reduce home fire fatalities.

In 1976, when my office was established, we were able to report only the number of deaths from fire per year. Through continuous refinement of our data analysis, we are now able to provide behavioral scenarios as well, which assist us in attacking the fire problem. The attachments in your packet indicate, as I am sure you already know, residential fire deaths account for the largest percentage of fire fatalities.

Some of the general awareness programs utilized in Pennsylvania in an effort to reduce home fire deaths include the following: the development and statewide distribution of a resource catalog that identifies available fire prevention programs and educators; the development and distribution of seasonal packets of fire prevention material to each paid and volunteer fire company in Pennsylvania; the establishment of a cadre of key trainers to provide technical assistance to communities for the development of their own public education programs; the delivery of "commissioner's seminars" throughout the Commonwealth on alternative heating devices, arson, juvenile fire-setters, smoke detectors, and others; the development and distribution of a pamphlet on smoke detectors which emphasized that the responsibility for preventing home fire deaths is ultimately the homeowner's; the collection and providing of sample smoke detector ordinances for those entities desiring to pursue the establishment of similar local legislation; the development of a 60-second public service videotape on the dangers of alternative heating devices, especially kerosene heaters; and the delivery of biennial conferences designed to heighten the public awareness of fire prevention and to impart educational information and programs to Pennsylvania's fire community.

I would now like to focus on the programs that are available in Pennsylvania to educate our children and the elderly and attempt to reduce home fire fatalities. Special orientation sessions have been held for fire service and elementary school educators on the NFPA's "Learn Not To Burn" Program and the Sesame Street Fire Safety Program designed by the Children's Television Workshop. Fire safety education programs have been conducted statewide for our senior citizens through the department of aging's network. Since the project started, 4,500 persons have been trained in the basics of fire prevention. Tangible results have also been received from our joint project with Nassau County, NY, in a mutual effort to develop a fire safety educational program entitled "Firecare."

Since I am confident that my colleague, Mr. Granito, will address the Firecare Program in depth, I shall not elaborate further on it other than to state that it will play an important role in our future program delivery for senior citizens. I might add, however, that Firecare is the second in a series of steps taken by my office to provide fire safety training to senior citizens. The first major efforts, previously referenced, were begun in September 1983 by offering basic instructions, using a program developed by the National Safety Council. Those efforts are continuing, and Firecare programs will be delivered by volunteer fire safety education instructors in much the same way. The third step will come when the advanced level course being developed by the Burn Foundation, under the auspices of the Community Volunteer Fire Prevention Program, has been fully tested and replicated for statewide use.

My next comments will address the utilization the State has made of past and present technological advances in support of home fire safety.

We recently completed a series of demonstrations to prove the speed and effectiveness of new residential fire sprinkler systems, utilizing one of the Federal Emergency Management Agency's trailers. An estimated 2,000 persons attended the demonstrations at the 1985 Homebuilders Show and the Pre-Fab and Modular Home Show in Harrisburg. In addition, 60,000 persons heard the promotional messages produced over the public address system. The sprinkler trailer was also utilized at major meetings of the International Association of Fire Chiefs, Eastern Division, the Society of Fire Prevention Engineers, and the Firemen's Association, State of Pennsylvania, with great success.

Our office, through the Federal Emergency Management Agency and its National Fire Academy, is participating in a series of six teleconferences for 1985 and 1986 on fire-related issues. The telecast on February 12 will address public fire education. We will invite our statewide fire prevention coordinating team and the task force on fire safety education to participate. We have participated, as well, in prior teleconferences. They are an excellent means of staying abreast of fire service issues, and the arrangements by FEMA have been greatly appreciated.

I participated in a unique and important fire safety event known as Operation San Francisco in 1983. The event consisted of a series of actual fire tests conducted in reproduced rooms within a vacant building, and an educational conference on building fire safety was conducted between the fire tests. At least 16 rigorous scientific tests were conducted and documented to indicate toxicity levels and other data. In addition, the conference sessions were used to present techniques in the process of getting sprinkler ordinances implemented in new and existing buildings.

Operation San Francisco was sponsored by the International Association of Fire Chiefs, the San Francisco Fire Department, and the Marriott Corp. A similar attempt in Harrisburg in promoting residential fire sprinkler systems is still pending, as we are continuing our efforts to locate and utilize a demonstration site that is suitable.

I would like to offer some comments on how well Federal fire programs have been coordinated with our State programs for dissemination.

With the establishment of the State fire focal point in 1976, Pennsylvania became eligible to participate in the various technical and financial assistance programs emanating from the National Fire Prevention and Control Administration, now the U.S. Fire Administration. Those programs then filtered down, either directly or indirectly, to local communities. Since 1976, slightly over $200,000 has been received by the State from various Federal sources to impact the fire problem.

Our first experience and opportunity to participate in a Federal grant was in 1977 and 1978, when we obtained $15,000 to implement a statewide organizational plan for fire education and training in Pennsylvania. Our second opportunity came in 1978, when we were able to participate in a $40,000 grant to test the feasibility of State-level fire prevention and control in master planning. Our third and greatest opportunity in terms of impacting the home fire safety problem came with the advent of the public education assistance program. In 1979 we were awarded a 3-year, three-phase grant to develop and implement a comprehensive statewide public education and assistance program for the Commonwealth. The amount awarded was $35,000. The activity generated and the benefits created by this particular grant were impressive indeed.

Other Federal involvement included participation in the 1983 and 1984 national conferences on fire safety and burn prevention, to which the office of fire safety services sponsored a total of 13 attendees. My office also consistently took advantage of sponsoring attendance at the previous Airlie conferences and media conferences offered under the auspices of the U.S. Fire Administration.

I am pleased to tell you how the Federal Government and private sector has supported our State efforts most recently, in addition to those programs previously referenced. In the fall of 1984, the Commonwealth of Pennsylvania was one of the first 10 pilot States selected to participate in FEMA's Community Volunteer Fire Prevention Program. Through the office of fire safety services, the goals and objectives of Pennsylvania's community volunteer fire prevention program are administered and achieved by a State fire prevention coordinating committee. That group is comprised of representatives of State fire service organizations, State agencies with fire-related responsibilities, community volunteer organizations, and representatives from the private sector having statewide interests.

Among the local community volunteer organizations competing for Federal funding, the following awards were made: The $25,000 urban grant was awarded to the Museum of Scientific Discovery in Harrisburg for a computer-driven exhibit to teach the science of fire prevention and fire safety to children. The exhibit also includes a life-sized model house where youngsters will be taught proper procedures for an exit drill in the home.

The $25,000 suburban grant was awarded to the northeast office of the Burn Foundation in Bethlehem for a five-part program to teach fire and burn safety to the elderly. The program addresses clothing ignition, the placement, care, and maintenance of smoke detectors, home hazards, cooking safety, and fire survival.

The $10,000 rural grant was awarded to the Allegheny Township Fire Prevention Community Programs, Inc., in Altoona for a mobile trailer training model to teach fire prevention, fire protection, and fire safety survival skills to communities. This training includes the proper and improper installation of auxiliary heating units and early-warning detection systems.

As a further update, you will be pleased to learn that the office of fire safety services and the Museum of Scientific Discovery held the formal dedication of the urban model program on the science of fire prevention and fire safety this past Monday. And, since a singular advantage of the community volunteer fire prevention program is that part of its concept which includes replication of the model programs being developed, the office of fire safety services is planning to replicate two of the urban "firehouse mouse" exhibits for installation at the Franklin Institute in Philadelphia and the Buhl Science Center in Pittsburgh.

The State fire commissioner's office has made application to the National Criminal Justice Association, acting on behalf of the National Governors' Association and the U.S. Fire Administration, for second-year funding of the community volunteer fire prevention program, and has received preliminary approval.

In conclusion, I would like to draw your attention to the chart which shows the decline in the number of fire deaths since the inception of the State fire focal point in Pennsylvania. It would be hard for me to estimate what this chart would show if it were not for the technical and financial assistance that was funnelled into the Commonwealth of Pennsylvania from the Federal Government, especially the U.S. Fire Administration. For that reason, I would say that no matter how this assistance comes to the States, whether through a public education assistance program, a community volunteer prevention program, or any other program, it is important that this type of assistance keep coming in some form to continue the worthy mandates set forth in "America Burning."

With that, Mr. Chairman, I would just like to leave the table for a few seconds and show a few viewgraphs that I brought along that will demonstrate the actions in the Commonwealth.

Mr. **WALGREN**. We would be interested.

Mr. **HENRY**. As has already been pointed out, Mr. Chairman, we are all concerned about our high-risk area, which is in the residential area, so it is extremely important that we continue our efforts if we are ever going to be successful in reducing the fire problem. I would like to add, as Mr. Bragdon pointed out in his testimony and as I pointed out, the quick-acting residential sprinkler—and Mr. Boehlert, I would strongly recommend in addition to your smoke detectors and your heat detectors, you certainly go with quick-acting residential sprinklers because that will offer you the greatest degree of protection for home fire safety.

Mr. **BOEHLERT**. That's at a dollar a square foot.

Mr. **HENRY**. Since the new technology, and since we have the ability to use polybutylene, the cost of the installation is reduced by 30 to 35 percent. At a dollar per square foot, you can't beat the price, so I think I would go for it.

These are just some of the general programs, sir, that have been offered, and all these programs were made available through Federal resources in the Commonwealth of Pennsylvania. Now I know that we have a tight schedule here, so I would like to just run through them rather hurriedly.

Resources placed in Pennsylvania, to give you just a little bit of an idea, and again I want to reiterate that none of these resources were available under the creation of our Federal fire focal point in 1976, and I certainly can't say enough about it. I've heard it said many times that all good men are filled with good intentions, good ideas, and good thoughts, but only a precious few ever translate those into action. I can say since the 1976 creation of our Federal fire focal point, the U.S. Fire Administration has been inundated with a lot of outstanding individuals who were filled with good thoughts, good ideas, and good intentions, that certainly translated those into action. This is positive proof.

Specific programs in fire safety education—seminars throughout the State, fire ordinances, composed an excellent resource catalog—all these things were made available through our Federal fire focal point.

These are the kind of the delivery systems that we work with in Pennsylvania. However, I will point out there are some counties that are still slow in getting involved, but we are working on that particular area. In all the real major, high-risk areas, as you can see, they have been addressed by our Federal fire focal point and these resources have been put into those State delivery systems that want to take advantage of them.

How does the money filter down? It comes right into the State, from the Federal Government to the State government, and then we put it right out, deliver it into local government.

Just to highlight a little bit of the Federal technical assistance to the program, again, local seminars, teleconferences, sprinkler trailer, State workshops, and national conferences.

Federal financial assistance programs, $40,000 for master planning, all of these again from the U.S. Fire Administration, and we did work with a small grant from the Consumer Product Safety Commission, very viable resources.

This gives you a little bit, similar to what I did, of the fire-related grants awarded to the State and how they were used. Organization, an outstanding Federal report that was available to all counties within the State, and master planning the same, another excellent report provided to the local communities in developing master plans, resource catalogs, and all these things are still in our delivery system, providing a great deal of resources.

We can't say enough about the newly created Community Volunteer Fire Prevention Program. You have raised a couple of questions, Mr. Chairman, in regard to the $10,000 that went to the State. I am pleased to say in Pennsylvania that we didn't use that $10,000 for administrative costs, and I think perhaps we are one of the first States that took advantage of the replication opportunity. We took that $10,000 and we used it to replicate two of the programs. That's the one we are going to put in Franklin Institute in Philadelphia and the other in the Buhl Science Center in Pittsburgh. That's how we spent our $10,000, so we believe that the Federal bucks can best be used directly out in the community and not in the office for administrative costs.

Another important question that you asked about just exactly how was it monitored, the kind of activity, it's an outstanding program. One of the first mandates to participate in a State, the State must develop a statewide committee consisting of local government, a local volunteer organization, a local community-based organization, and also private industry. That's our statewide committee, and you see our three recipients were urban, rural, and suburban.

To show you how it is designed to work—and it really does work—these are the members of our statewide committee. We have our State agency, the department of aging. Who could we better work with when we want to deal with our senior citizens? They have a built-in delivery system, they have all kinds of resources, and they know the system better than anybody. The Department of Education, it's their mandate to train and educate all of us. The Department of Environmental Resources, the Pennsylvania Commission on Crime and Delinquency.

Our fire service organizations, as you can see, are all leaders of the fire service organizations in the Commonwealth, and then we have our three local recipients.

The private sector, E.I. duPont, and their tremendous reputation for concerns about safety; Marriott Corp., the Pennsylvania Association of Mutual Insurance Companies. The Volunteer Firemen's Insurance Services, Inc., they do business in about 47 States and have got a lot of tremendous resources in their program.

Then our community volunteers, the Guard, Boy Scouts, Pioneers, and so forth.

How does it work? What is this committee? It is a working committee. They are supposed to coordinate. They are supposed to inform. They are supposed to tell the world about what it is we do. They are supposed to monitor and make sure that our three local recipients are meeting the milestones that we established for them, to evaluate—we evaluate their efforts—and also facilitate. We are looking for other resources in addition to the funding resources and how we can best replicate these programs.

We were very fortunate in the Commonwealth that it worked out this way. We established the criteria on how we were going to award these three grants, and one of them went to the Museum of Scientific Discovery, the Burn Foundation, and the rural one. You can see how they are located across the State. When I say we are lucky, it would almost look like we planned it this way based on the high-risk areas that we are concerned with. Harrisburg's project deals strictly with the children. Bethlehem's deals strictly with the elderly, and the Altoona project is the general community, which we were pleased the way it worked out.

As I had mentioned there, the 17th we will be in Pittsburgh. We are going to do this and we would love to have you, Mr. Chairman, if you are out in the Pittsburgh area between 1 and 2 o'clock. The other one, we have to—the date will be announced.

Mr. WALGREN. What date is that again?

Mr. HENRY. The 17th.

Mr. WALGREN. Of October?

Mr. HENRY. The 17th from 1 to 2 o'clock, if you are in the area.

Mr. WALGREN. OK.

Mr. HENRY. Last but not least, I know I quoted about "good thoughts, good ideas, and good intentions." I have heard it said that things will come to those who wait, but only the things left by those who hustle, so I really think it's long overdue that we members of the fire service really get out there and really try to hustle, and to continue to try to support your efforts down here to bring more resources into the areas that we are concerned about in reducing the fire problem.

Again, in closing, had it not been for those Federal resources provided to us in the Commonwealth of Pennsylvania, that success story would not be made possible today that I bring with me at this particular hearing. I am not overly happy that since we reached that alltime low in 1982, when we got down to 290—prior to that we averaged about 385 fire fatalities annually in Pennsylvania—but since that effort in 1976, and in 1982 the alltime low was 290, you can see it went up about 13 percent in 1983. We're not overly happy about that, but I promise we're going to do something about it. With that, I would like to thank you for the opportunity to provide this testimony.

[The prepared statement of Mr. Henry follows:]

STATEMENT PRESENTED
TO THE
SUBCOMMITTEE ON
SCIENCE, RESEARCH AND TECHNOLOGY

U.S. HOUSE OF REPRESENTATIVES

HEARING
OCTOBER 9, 1985
9:30 A.M. - 12:00 NOON
WASHINGTON, D.C.

BY
CHARLES A. HENRY
STATE FIRE COMMISSIONER
COMMONWEALTH OF PENNSYLVANIA

HENRY9/x

Mr. Chairman and Members of the Sub-Committee, good morning. My name is Chet Henry; I am the State Fire Commissioner for the Commonwealth of Pennsylvania and Director of the Office of Fire Safety Services within the Pennsylvania Emergency Management Agency.

I. STATE EFFORT - REDUCTION OF HOME FIRE FATALITIES

I would like to tell you what has been done in Pennsylvania to reduce home fire fatalities. In 1976, when my office was established,[*] we were able to report only the number of deaths from fire per year. Through continuous refinement of our data analysis,[**] we are now able to provide behavioral scenarios as well, which assist us in attacking the fire problem.[***] As you see here, and as I am sure you already know, residential fire deaths account for the largest percentage of fire fatalities. Some of the programs[****] utilized in Pennsylvania to reduce those home fire deaths include the following:

- The development and statewide distribution of a Resource Catalog of available fire prevention programs and educators;

- The development and statewide distribution of "Seasonal Packets" to each paid and volunteer fire company in Pennsylvania;

- The establishment of a cadre of key trainers to provide technical assistance to communities for the development of their own public education programs;

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[*] ATTACHMENT #1

[**] ATTACHMENT #2

[***] ATTACHMENT #3 and 22 Series

[****] ATTACHMENT #4A, 4B, 5A, 5B

- The delivery of "Commissioner's Seminars"* throughout the Commonwealth on "Alternative Heating Devices"; "Arson"; "The Fire and Panic Law"; "Juvenile Firesetters"; and "Smoke Detectors";

- The development and distribution of a pamphlet on smoke detectors which emphasized that the responsibility for preventing home fire deaths was ultimately the homeowners;

- The collection of sample smoke detector ordinances for those entities desiring to pursue the establishment of similar local legislation;

- The development of a 60-second public service videotape on the dangers of alternative heating devices -- especially kerosene heaters; and

- The delivery of biennial conferences** designed to heighten the public's awareness of fire prevention, and to impart educational information and programs to Pennsylvania's fire community.

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*ATTACHMENT #5A and B
**ATTACHMENT #6

II. AVAILABLE PROGRAMS - CHILDREN AND ELDERLY

I would now like to focus on the programs that are available in Pennsylvania to educate our children and the elderly in our attempt to reduce home fire fatalities.

- Special orientation sessions have been held for fire service and elementary school educators on the NFPA's "Learn Not To Burn" Program* and the "Sesame Street"* Fire Safety Program designed by the Children's Television Workshop.*

- Fire safety education programs* have been conducted for senior citizens through the Department of Aging's network of area agencies and senior centers. Since the project started, 4,500 persons have been trained in the basics of fire prevention.

- Tangible results have also been received from our joint project with Nassau County, New York in a mutual effort to develop a fire safety educational program entitled "FIRECARE".

*ATTACHMENT #5A and B

Since I am confident that my colleague, Anthony Granito, will address the "FIRECARE" program in depth, I shall not elaborate further on it other than to state that it will play an important role in our future program delivery for senior citizens. I might add, however, that "FIRECARE" is the second in a series of steps taken by my office to provide fire safety training to senior citizens. The first major efforts, previously referanced, were begun in September of 1983 by the offering of basic instruction using National Safety Council materials. Those efforts are continuing. "FIRECARE" programs, considered to be an intermediate level of instruction, will be delivered by volunteer fire safety education instructors in much the same way. The third step will come when the advanced level course being developed by the Burn Foundation, under the auspices of the "Community Volunteer Fire Prevention Program", has been fully tested and replicated for statewide use.

III. TECHNOLOGICAL ADVANCES AND ACTIVITIES

My next comments will address the utilization the state has made of past and present technological advances in support of home fire safety.

- We recently completed a series of demonstrations to prove the speed and effectiveness of new residential fire sprinkler systems, utilizing one of the Federal Emergency Management Agency's trailers.* An estimated 2,000 persons attended the demonstrations** at the 1985 Home Builders' Show and the Pre-Fab and Modular Home Show in Harrisburg, and an additional 60,000 persons heard the promotional messages produced over the public address system. The sprinkler trailer was also utilized at major meetings of the IAFC Eastern Division, the Society of Fire Prevention Engineers, and the Firemen's Association, State of Pennsylvania, with great success.

*ATTACHMENT #7
**ATTACHMENT #8

- o Our office, through the Federal Emergency Management Agency and its National Fire Academy, is participating in a series of six teleconferences for 1985 and 1986 on fire related issues.* The telecast on February 12 will address public fire education; we will invite our Statewide Fire Prevention Coordinating Team and the Task Force on Fire Safety Education to participate. We have participated, as well, in prior teleconferences.* They are an excellent means of staying abreast of fire service issues, and the arrangements by FEMA have been greatly appreciated.

- o I participated in a unique and important fire safety event known as "Operation San Francisco" in 1983. The event consisted of a series of actual fire tests conducted in reproduced rooms with a vacant building, and an educational conference on building fire safety conducted between the fire tests. At least 16 rigorous scientific tests were conducted and documented to indicate toxicity levels and other data. Additionally, the conference sessions were used to present techniques, and the process of getting them implemented in new and existing buildings. "Operation San Francisco" was sponsored by the International Association of Fire Chiefs; the San Francisco Fire Department, and the Marriott Corporation. A similar attempt locally at promoting a new residential fire sprinkler system is still pending as we are continuing our efforts to locate and utilize a demonstration site that is suitable.**

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*ATTACHMENT #9
**ATTACHMENT #10

IV. FEDERAL INTERRELATION WITH STATE PROGRAMS

I would now like to offer some comments on how well the federal fire programs have coordinated with our state programs for dissemination.

With the establishment of the state fire focal point in 1976, Pennsylvania became eligible to participate in the various technical and/or financial assistance programs emanating from the National Fire Prevention and Control Administration — now the United States Fire Administration.* Those programs then filtered down, either directly or indirectly, to local communities.** Since 1976, slightly over $200,000 has been received by the state from various federal sources to impact upon the fire program.***

- Our first experience and opportunity to participate in a federal grant was in 1977 and 1978, when we obtained $14,856 to implement a statewide organizational plan for fire education and training in Pennsylvania.

- Our second opportunity came in 1978 when we were able to participate in a $40,000 grant to test the feasibility of state level fire prevention and control master planning.

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*ATTACHMENT #11 and #12
**ATTACHMENT #13
***ATTACHMENT #14, 15A, 15B

- Our third and greatest opportunity, in terms of impacting the home fire safety problem, came with the advent of the Public Education Assistance Program. In 1979, we were awarded a three-year, three-phase grant to develop and implement a comprehensive statewide public education and assistance program for the Commonwealth of Pennsylvania. The amount awarded was $35,000; the activity generated and the benefits created by this particular grant were impressive indeed.*

- Other federal involvement included participation in the 1983 and 1984 National Conferences on Fire Safety and Burn Prevention, to which the OFSS sponsored a total of 13 attendees. My office also consistently took advantage of sponsoring attendance at the previous "Airlie" Conferences and "Media" Conferences offered under the auspices of the U.S. Fire Administration.

*ATTACHMENT #15A

V. FEDERAL GOVERNMENT - PRIVATE SECTOR SUPPORT

I am pleased to tell you how the federal government and/or private sector has supported our state efforts most recently, in addition to those programs previously referenced.

In the Fall of 1984, the Commonwealth of Pennsylvania was one of the first ten pilot states selected to participate in FEMA's "Community Volunteer Fire Prevention Program".[*]

Through the Office of Fire Safety Services, the goals and objectives of Pennsylvania's CVFPP are administered and achieved by a State Fire Prevention Coordinating Committee.[**] That group is comprised of representatives of state fire service organizations; state agencies with fire related responsibilities, community volunteer organizations and representatives from the private sector having statewide interests.[***]

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[*] ATTACHMENT #16
[**] ATTACHMENT #17
[***] ATTACHMENT #18

HENRY9/x

Among the local Community Volunteer Organizations[*] competing for federal funding, the following awards[**] were made:

- o The $25,000 urban grant was awarded to the Museum of Scientific Discovery, Harrisburg, for a computer-driven exhibit to teach the science of fire prevention and fire safety to children. The exhibit also includes a life-sized model house where youngsters will be taught proper procedures for an exit drill in the home.

- o The $25,000 suburban grant was awarded to the Northeast Office of The Burn Foundation, Bethlehem, for a five-part program to teach fire and burn safety to the elderly. The program addresses clothing ignition; placement, care and maintenance of smoke detectors; home hazards; cooking safety, and fire survival.

- o The $10,000 rural grant was awarded to the Allegheny Township Fire Prevention Community Programs, Inc., Altoona, for a mobile trailer training module to teach fire prevention, fire protection and fire safety survival skills to communities. This training includes the proper and improper installation of auxiliary heating units and early detection systems.

[*] ATTACHMENT #19

[**] ATTACHMENT #20

As a further update, you will be pleased to learn that the OFSS and the Museum of Scientific Discovery held the formal dedication of the urban model program on the "Science of Fire Prevention and Fire Safety" this past Monday. And, since a singular advantage of the CVFPP is that part of its concept which includes replication of the model programs being developed, the OFSS is planning to replicate two of the urban "Firehouse Mouse" exhibits for installation at the Franklin Institute in Philadelphia and the Buhl Science Center in Pittsburgh.*

The State Fire Commissioner's Office has made application to the National Criminal Justice Association, acting on behalf of the National Governor's Association and the United States Fire Administration, for second-year funding of the CVFPP, and has received preliminary approval.

CONCLUSION

In conclusion, I would like to draw your attention to the chart which shows the decline in the number of fire deaths since the inception of the state focal point in Pennsylvania.** It would be hard for me to estimate what this chart would show if it were not for the technical and financial assistance that was funneled into the Commonwealth of Pennsylvania from the federal government, particularly the United States Fire Administration. For that reason, I would say that no matter how this assistance comes to the states, whether through a "Public Education Assistance Program", a "Community Volunteer Fire Prevention Program" or any other program, it is important that this type of assistance keep coming in some form to continue the worthy mandates set forth in "America Burning". Thank you for your attention; I shall be happy to answer any questions you may have at this time in reference to my statement or the attachments which have been provided.

*ATTACHMENT #21
**ATTACHMENT #22

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
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HENRY9/v/sak

October 9, 1985

LISTING OF ATTACHMENTS

ATTACHMENT #	TYPE	DESCRIPTION
1	Fact Sheet	Fire Prevention and Control in Pennsylvania
2	Fact Sheet	Fire Death Data in Pennsylvania
3	Chart	Fire Death Victims - Resident/Non-Resident, 1983
4A	Chart	General Programs - Public Fire Safety Education
4B	Chart	Resources Placed-Pennsylvania - 1976-1985
5A	Chart	Specific Programs - Public Fire Safety Education
5B	Chart	Educational Sessions Conducted-Pennsylvania - 1976-1985
6	Fact Sheet	Fire Awareness Symposium IV
7	Fact Sheet	Residential Fire Sprinkler Trailer
8	Fact Sheet	Special Demonstrations at 1985 Home Builders Show
9	Fact Sheet	Fire Service Teleconferences
10	Fact Sheet	Proposed Sprinkler Workshop and Burn Demonstration
11	Chart	Federal Technical Assistance To Fire-Related Programs
12	Chart	Federal Financial Assistance To Fire-Related Programs
13	Chart	Federal Fire-Related Program Dissemination
14	Fact Sheet	Grant Activity in State Fire Commissioner's Office
15A	Chart	Fire-Related Grants Awarded To Pennsylvania By Federal Government - 1977 - 1983
15B	Chart	Fire-Related Grants Awarded To Pennsylvania By Federal Government - 1984 - 1985

Listing of Attachments

October 9, 1985

ATTACHMENT #	TYPE	DESCRIPTION
16	Chart	CVFPP In Action (Coordination)
17	Chart	Pennsylvania Statewide CVFPP Coordinating Committee (Duties)
18	Chart	Pennsylvania Statewide CVFPP Coordinating Committee (Structure)
19	Chart	CVFPP Awards (Placement)
20	Chart	Local CVOs (Location and Focus)
21	Chart	Urban CVO Program (Replication)
22	Chart	Fire Deaths In Pennsylvania Since Inception of Statewide Focal Point
A.1 Through E.2	Charts	1983 Fire Death Data - Commonwealth of Pennsylvania (All Counties Except Philadelphia/Allegheny)

ATTACHMENT #1

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

HENRY[illegible]

FACT SHEET

October 9, 1985

Activity:	Fire Prevention and Control in Pennsylvania
How Established:	As the result of the establishment of the National Fire Prevention and Control Administration by virtue of the Federal Fire Prevention and Control Act of 1974, a Governor's Commission on Fire Prevention and Control was established by then Governor Milton Shapp, through an Executive Order, to assess the potentiality encompassed by a sound fire loss management program and to make recommendations. The Governor's Commission, after considerable deliberation and research issued its report entitled, "Pennsylvania Burning" in 1976, and concluded that a central authority -- a State Fire Commissioner -- was needed to enforce, interpret and coordinate Pennsylvania's fire prevention and control activities. That position was subsequently established as a natural extension of the Executive Order in December of 1976, and placed within the Department of Labor and Industry with broad responsibilities but without specific statutory authority.
Original Responsibility:	The major responsibility assigned was that of the overall development of the Commonwealth's fire loss management system. Coordination was also to be provided of state and local community interests engaged in fire prevention and control activities, and programs were to be developed with the objective of reducing loss of life and property in the Commonwealth attributable to fire.
Development of Network:	Confident of the many unique talents and resources that were available within the Commonwealth, the State Fire Commissioner enlisted talented and resourceful people to work with him in specific areas of endeavor without any reimbursement for salary, travel or incidental costs. The "Commissioner's Task Force on Fire Safety Education", is one of the most active of those groups. A county liaison system was established to provide a network for the efficient dissemination of information; a state agency advisory board was instituted to provide full and mutual conveyance of information pertaining to existing and future resources; and a cadre of key fire safety education trainers was developed throughout the Commonwealth to assist in the delivery of fire safety programs.

Services Provided: The Commonwealth's first State Fire Commissioner developed programs of information and education designed to create a total public awareness of fire safety; administered the federal grants awarded to his office as the state fire focal point; disseminated information about fire prevention and control techniques; served as a liaison with the Pennsylvania General Assembly on matters relating to fire safety and to firefighters; acted as a central contact to assist local and statewide interests in matters pertaining to fire prevention and control, and published a quarterly newsletter, the "FIRE CRIER", which was disseminated to every paid and volunteer fire company in the Commonwealth.

Agency Transfer: On February 18, 1981, Governor Dick Thornburgh proposed the creation of an Office of Fire Safety Services within the Pennsylvania Emergency Management Agency (PEMA) as a major first step toward consolidating state government assistance and programs to the fire community.

Under the reorganization, the State Fire Commissioner's Office was transferred from the Department of Labor and Industry; the Volunteer Loan Assistance Program from the Department of Community Affairs, and the State Fire School from the Department of Education, all moving to the Pennsylvania Emergency Management Agency, which exercises its mandates under Act 323 of 1978, P.L. 1332.

The Office of Fire Safety Services became a functioning entity on July 1, 1981, and, as the single state focus for fire safety programs and issues, was comprised of three components: The State Fire Commissioner's Office; the Volunteer Loan Assistance Program, and the State Fire Academy. The State Fire Commissioner, as OFSS Director, reports to the PEMA Director through the Deputy Director. The Administrators of the Volunteer Loan Assistance Program and the State Fire Academy report to the OFSS Director. The SFC Office and the VLAP are housed within PEMA headquarters at Harrisburg; the State Fire Academy remains at its original site in Lewistown, Pennsylvania.

ATTACH

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

HENRY8/f

FACT SHEET

October 9, 1985

Activity: Fire Death Data in Pennsylvania

Purpose: The State Fire Commissioner serves as a focal point for information pertaining to fires, deaths, injuries, and property damage.

How Determined: The statistics involved in Pennsylvania's fire death data are compiled from death certificates filed for Pennsylvania on persons who expire from fire and flame accidents during a given year. The underlying cause of death for each event is determined by trained nosologists of the Pennsylvania Department of Health's Data Center who use the International Classification of Diseases (ICDA) to ascertain the single underlying cause of death listed on each certificate. After determining the cause of death, each event is assigned to the county as reported on the certificate. Additional information such as age and race is also gleaned from the certificates and assigned to each event. (There is usually a lapse of up to one year in receiving fire death data.)

How Relegated: Absolute counts of fire deaths do not readily lend themselves to quick analysis and comparison between years and between counties, age or race, because of population differences. In order to assess the scope of fire deaths in Pennsylvania, it has been necessary to convert the absolute number of deaths to a rate of death per 100,000 persons. It should therefore be kept in mind that differences in the demographic composition of the populations of the various counties may prevent the use of those rates to assess differences in fire protection.

Summary: Pennsylvania follows the national fire death trend in that residences represent the preponderance of high risk locations, and that the state's elderly (60 and over) and its infants (4 and under) are those most susceptible to death from fire. Pennsylvania's minority population is also particularly susceptible to fire and flame deaths.

How Obtained: Specific data pertaining to counties and/or other categories of information may be obtained from:

Address:
State Fire Commissioner's Office
Office of Fire Safety Services
Pennsylvania Emergency Management Agency
B-118 Transportation and Safety Building
Harrisburg, Pennsylvania 17120

Telephone: (717) 783-5061

ATTACHMENT #3

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

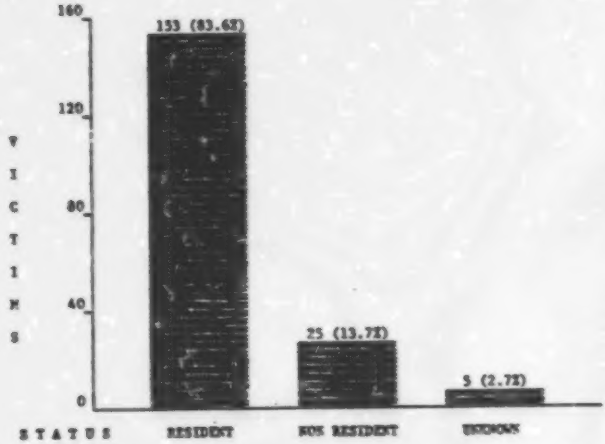
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

A.6

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

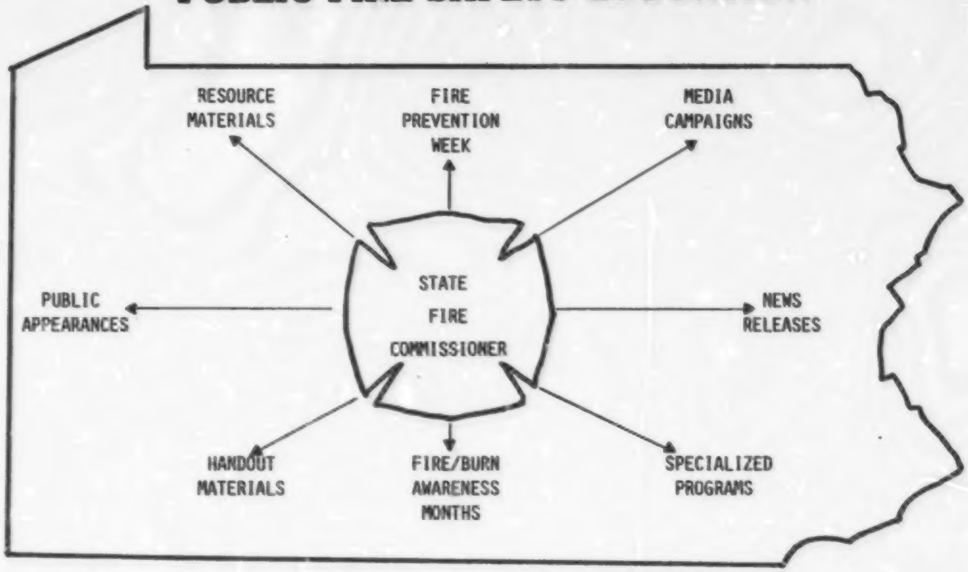
DID FIRE DEATH VICTIM RESIDE IN FIRE BUILDING?

1983



AR/CH7/T
11/13/84

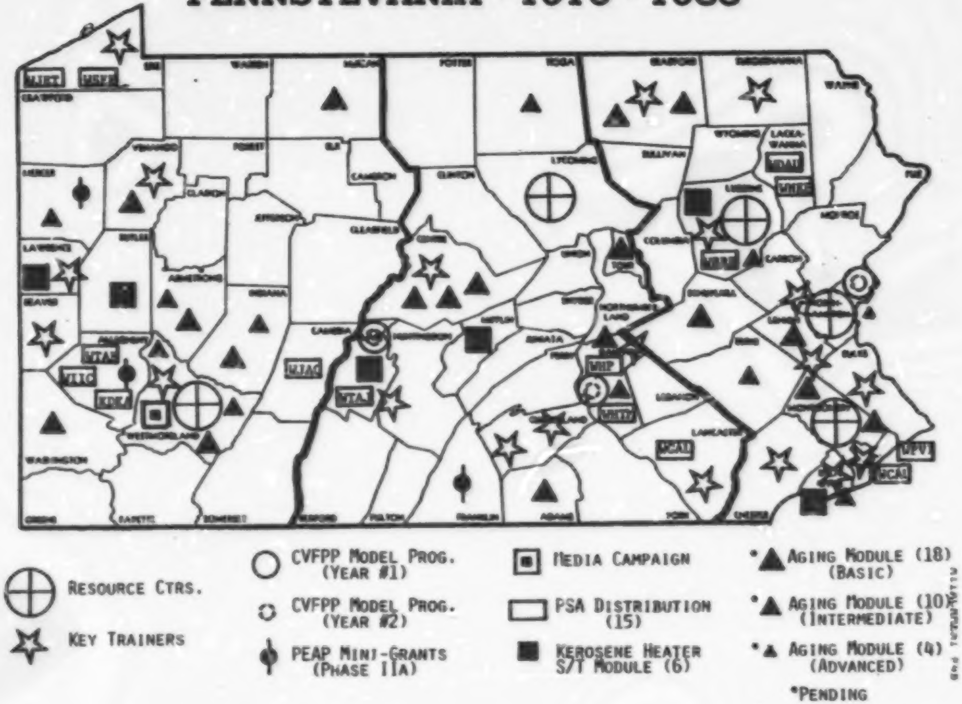
GENERAL PROGRAMS
PUBLIC FIRE SAFETY EDUCATION



PENNSYLVANIA - 1976 - 1985

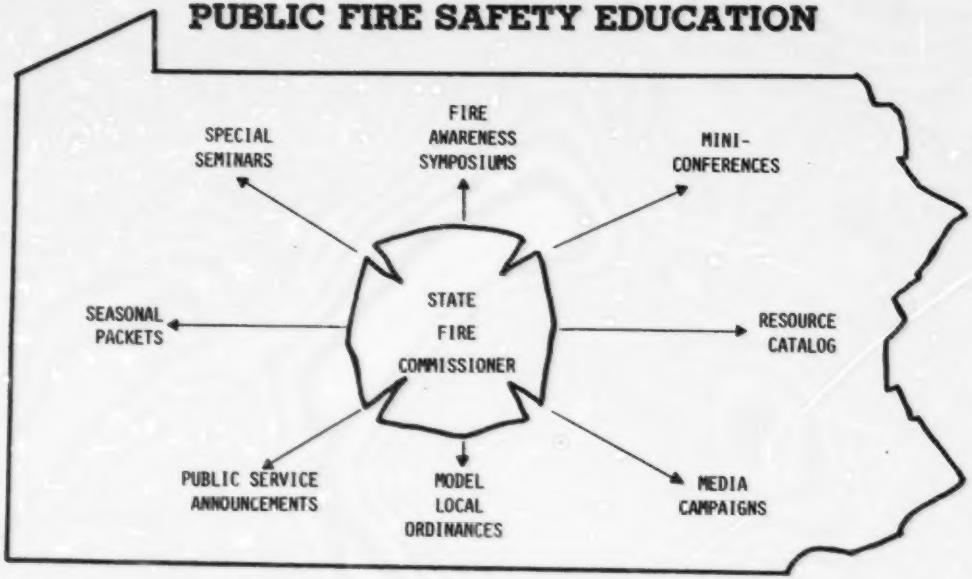
ATTACHMENT #4A

RESOURCES PLACED
PENNSYLVANIA - 1976 - 1985


RESOURCE CTRS.
KEY TRAINERS
CVFPP MODEL PROG. (YEAR #1)
CVFPP MODEL PROG. (YEAR #2)
PEAP MINI-GRANTS (PHASE IIA)
MEDIA CAMPAIGN
PSA DISTRIBUTION (15)
KEROSENE HEATER S/T MODULE (6)
*AGING MODULE (18) (BASIC)
*AGING MODULE (10) (INTERMEDIATE)
*AGING MODULE (4) (ADVANCED)
*PENDING

SPECIFIC PROGRAMS

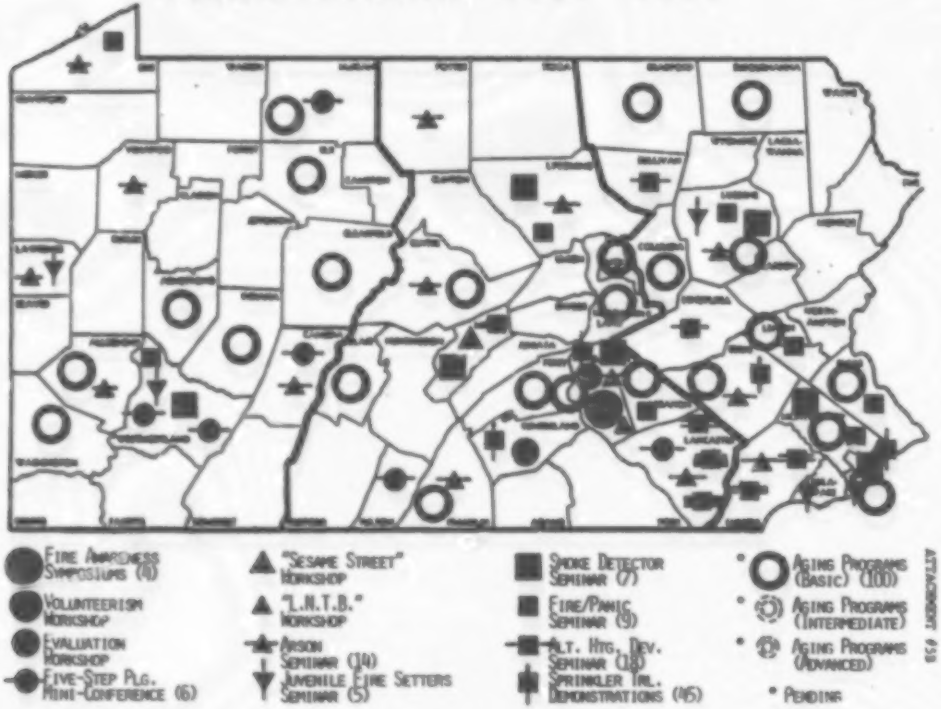
PUBLIC FIRE SAFETY EDUCATION



PENNSYLVANIA - 1976 - 1985

ATTACHMENT #5A

EDUCATIONAL SESSIONS CONDUCTED
PENNSYLVANIA - 1976 - 1985


Fire Awareness Symposiums (4)
Volunteerism Workshop
Evaluation Workshop
Five-Step Plg. Mini-Conference (6)
"Sesame Street" Workshop
"L.N.T.B." Workshop
Arson Seminar (14)
Juvenile Fire Setters Seminar (5)
Smoke Detector Seminar (7)
Fire/Panic Seminar (9)
Alt. Htg. Dev. Seminar (18)
Sprinkler Trl. Demonstrations (45)
* Aging Programs (Basic) (100)
* Aging Programs (Intermediate)
* Aging Programs (Advanced)
* Pending

ATTACHMENT #3B

ATTACHM

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

HENRY9/a/sak

FACT SHEET

October 9, 1985

Activity: Fire Awareness Symposium IV

Purpose: The symposium focused on ways to reduce fire deaths and fire losses in Pennsylvania, and looked at the effectiveness of various public fire safety education programs and resources which are shared among fire safety educators.

Opening Session: Lt. Governor William Scranton, III, gave the opening remarks on April 26, 1985. He was followed by Larry Davis of the International Society of Fire Service Instructors, who spoke on "Positioning: The Fire Service's Battle for Survival", and James Dalton, also of the I.S.F.S.I., who spoke on the United States Fire Administration's Community Volunteer Fire Prevention Program and who stressed that the fire problem has to be solved at the grass roots level.

Specialized Sessions: In addition to the general session speakers, symposium attendees had their choice of sixteen specialized workshop sessions which dealt with such topics as residential fire safety; fire safety for the handicapped; arson causes; industrial safety; computers; hazardous materials, alternative heating devices, and residential sprinklers. The USFA's residential sprinkler trailer was on display, as was Westmoreland County's new hazardous materials response unit.

A new feature, and one of the highlights of the symposium, was the staging and production of Pennsylvania's first "Fire Safety Family Feud". Led by eight members of the Pennsylvania Professional Fire Service Qualifications Board acting as team leaders, eight groups competed against each other from Blair County; Chester County; Dauphin/Cumberland Counties; Delaware County; Erie/Venango Counties; Luzerne County, Mercer County and Westmoreland County. In the finals, the western Pennsylvania team emerged victorious in a run-off between the Luzerne County "Firestoppers" and the Westmoreland County "Smokebusters". A technical team from the Latrobe/Unity/Youngstown Area Fire Departments developed, built and operated the game show.

"Symposium Showcase": On Friday evening, registrants had the opportunity to circulate throughout the ballroom and visit the several dozen booths featuring local fire prevention programs. Also on hand were representatives from the various state agencies administering fire-related programs. This segment of the symposium, known as the "Showcase", was kicked off by a team of aerobic dancers composed of firefighters from the Greensburg Fire Department. The Showcase's grand finale was the live fire/burn demonstration given in the residential sprinkler trailer.

General Session: Saturday's general session featured a somber note with Alan Breslau's remarks concerning "The Burn Patient's 'Right' To Die". Breslau, a victim of massive burns from a plane crash, is the founder of The Phoenix Society, an organization for burn survivors. At luncheon, Charles Burkell of the National Fire Academy spoke on "Trends in Public Fire Safety Education".

Costs for Speakers: USFA/NFA participation transpired at no cost to the Federal Emergency Management Agency; all related costs were absorbed by the Office of Fire Safety Services. As with previous symposiums, all speakers and participants were engaged without honorariums; the national fire service network continues to grow and is utilized, on a reciprocal basis, at every opportunity.

Post-Convention Meeting: Following the conclusion of Fire Awareness Symposium IV, a quarterly meeting of the statewide Fire Prevention Coordinating Team was convened which conducted a mid-year evaluation of the three local community volunteer fire prevention grants awarded to Pennsylvania and critiqued the workshops presented at the symposium by those recipients.

Next Symposium: It is anticipated that Symposium V will be held in April of 1987.

ATTACHMENT #7

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

FACT SHEET

October 9, 1983

Activity: Residential Fire Sprinkler Trailer

Purpose: The Residential Fire Sprinkler Trailer has been constructed and made available to demonstrate the technological advances made in residential sprinkler systems.

Provided By:

Federal Emergency Management Agency
United States Fire Administration
National Emergency Training Center
Emmitsburg, Maryland 21727

Operated By:

International Society of Fire Service Instructors
20 Main Street
Ashland, Massachusetts 01721

Arranged By:

Charles A. Henry
State Fire Commissioner
Office of Fire Safety Services
Pennsylvania Emergency Management Agency
Box 3321
Harrisburg, Pennsylvania 17105
(717) 783-5061

Construction: The trailer was originally a 22' Terry travel trailer. The inside was completely torn out and a new room was built measuring 13' x 6' 9". The renovation involved the use of 2' x 4' studs and rafters which then received 3½" of fiberglass insulation and were covered with ½" gypsum wallboard. Much of the original electrical wiring, outlets and breaker panel was re-used in the final product

The trailer is equipped with three independent sprinkler systems with fast-acting sprinkler heads. It also includes photo lights, a floor alarm bell and two smoke detectors.

Test Conditions: Cotton curtains are hung in the rear of the trailer and a trashcan full of paper is placed in the right rear corner. No more than five participants are seated on a bench in the left front corner of the trailer. Safety precautions are taken to allow easy exit of those people if an accident should occur. A fire is started in the trashcan which quickly spreads to the drapes and the ceiling. A clock is activated as soon as the fire begins; sprinkler heads spray water usually within one minute or less.

Grant No./ Ident. No.	Amount Period	Purpose of Grant
Grant #9 EMW-84-K-1686	$10,000 1984-1985	Statewide coordination of the Community Volunteer Fire Prevention Program in Pennsylvania - Year #1.
Grant #10 EMW-84-K-1696	$10,000 1984-1985	Development of a Rural model program for communities under the Community Volunteer Fire Prevention Program - Year #1. (Allegheny Township Fire Prevention Community Programs, Inc.)
Grant #11 EMW-84-K-1697	$25,000 1984-1985	Development of an Urban model program for children under the Community Volunteer Fire Prevention Program - Year #1. (Museum of Scientific Discovery, Harrisburg).
Grant #12 EMW-84-K-1698	$25,000 1984-1985	Development of a Suburban model program for the elderly under the Community Volunteer Fire Prevention Program - Year #1. (Burn Foundation, Allentown).

NOTE: An additional $56,000 is pending for Year #2 of the CVFPP.

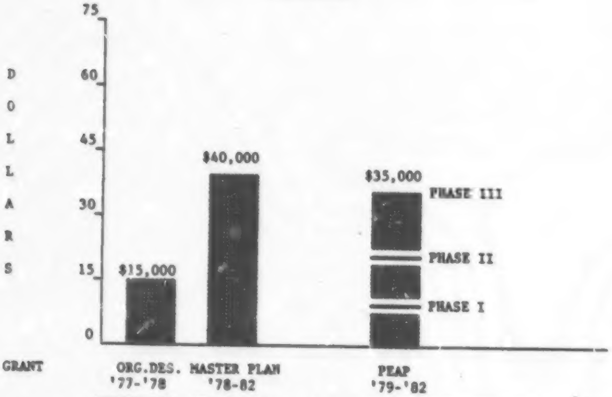
ATTACHMENT #15A

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

CH14/F/AR
10/03/85

FIRE-RELATED GRANTS AWARDED TO PENNSYLVANIA BY FEDERAL GOVERNMENT

1977 - 1983



RESULTS

ORG.DES.: STUDY REPORT

MASTER PLAN: STUDY REPORT

PEAP:
- RESOURCE CAT.
- RESOURCE CTRS.
- SEASONAL PACKETS
- CADRE DEVELOP.
- FIRE AWARENESS SYMPOSIUMS
- MINI-GRANTS
- MINI-CONF.
- TRG. SESSIONS
- PSA KITS
- "LEARN NOT TO BURN" KITS

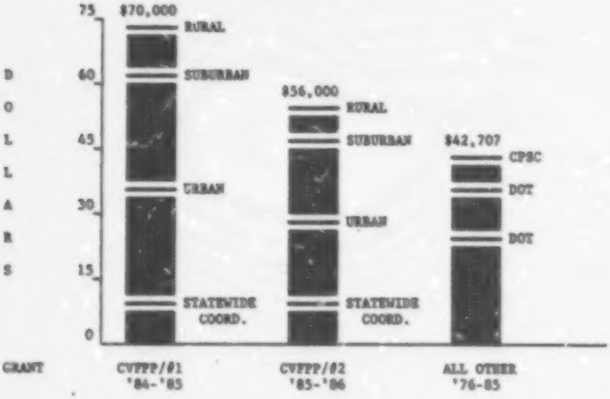
ATTACHMENT #15B

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

CH14/G/AH
10/03/85

FIRE-RELATED GRANTS AWARDED TO PENNSYLVANIA BY FEDERAL GOVERNMENT

1984 - 1985

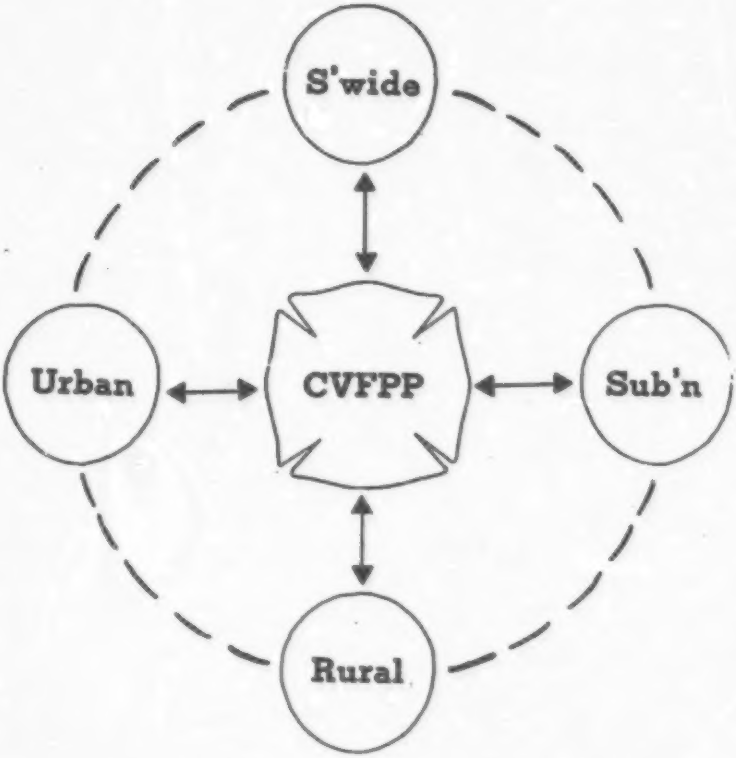


RESULTS	°COORD. COMM. °URBAN MODEL PROGRAM °SUBURBAN MODEL PROGRAM °RURAL MODEL PROGRAM	°COORD. COMM. °URBAN MODEL PROGRAM °SUBURBAN MODEL PROGRAM °RURAL MODEL PROGRAM	°HAZ MAT PROGRAMS °EMT REFRESHER PROGRAMS °SMOKE DETECTOR PROGRAMS

ATTACHMENT #16

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

CVFPP IN ACTION



ATTACHMENT #17

PENNSYLVANIA

STATEWIDE CVFPP

STATE F/P COORD. COMM.

Coordinates

Informs

Monitors

Evaluates

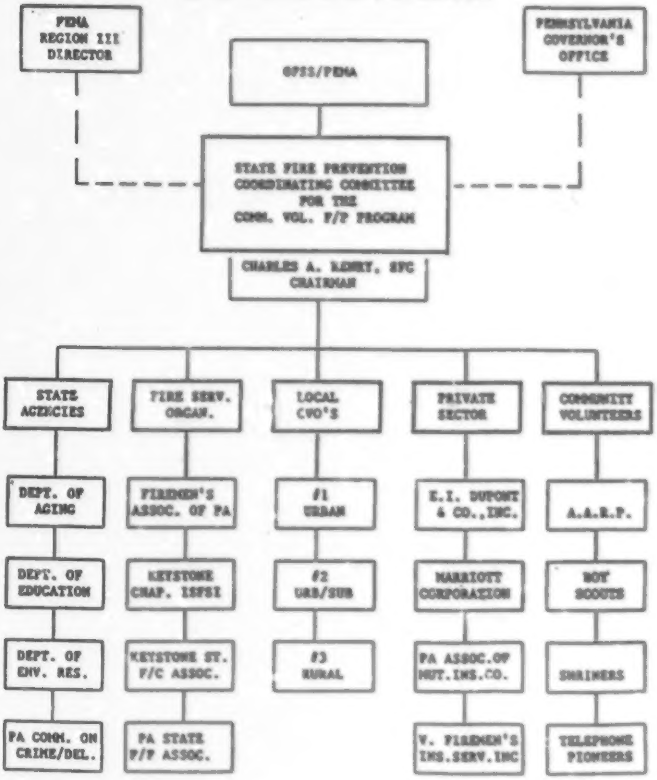
Facilitates

●

ATTACHMENT #18

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

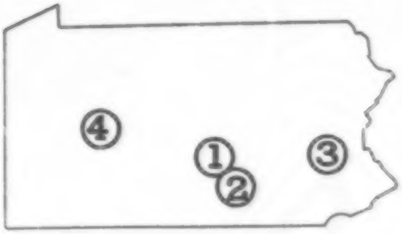
PENNSYLVANIA



ATTACHMENT #19

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

CVFPP AWARDS



① **STATEWIDE**
Office of Fire Safety Services

② **URBAN**
Museum of Scientific Discovery

③ **SUBURBAN**
Burn Foundation

④ **RURAL**
Allegheny Twp. F/P Comm. Prog.

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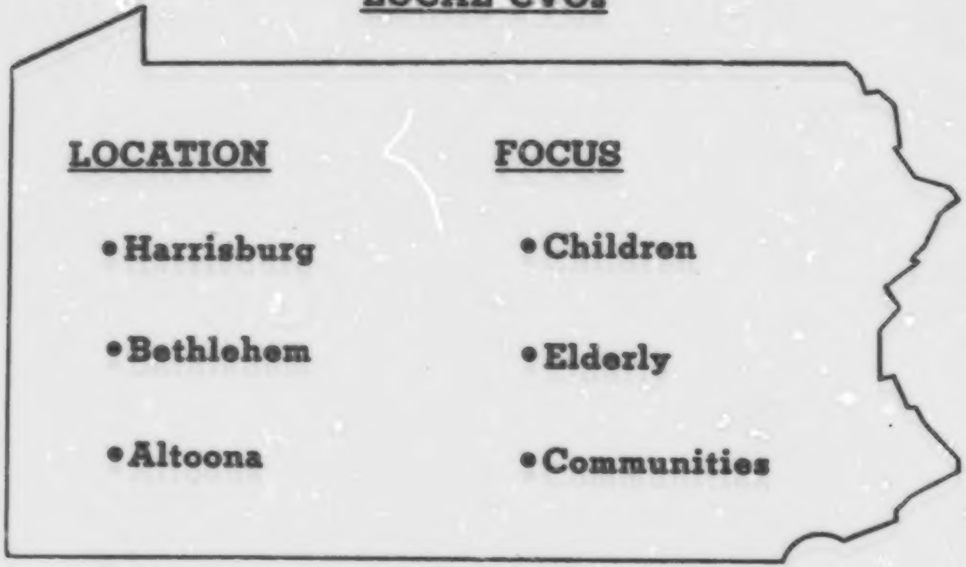
LOCAL CVOs



LOCATION	FOCUS
• Harrisburg	• Children
• Bethlehem	• Elderly
• Altoona	• Communities

PENNSYLVANIA

ATTACHMENT #20

ATTACHMENT #21

URBAN CVO PROGRAM

PROGRAM REPLICATION

FRANKLIN INSTITUTE SCIENCE MUSEUM

Philadelphia

✓

BUHL SCIENCE CENTER

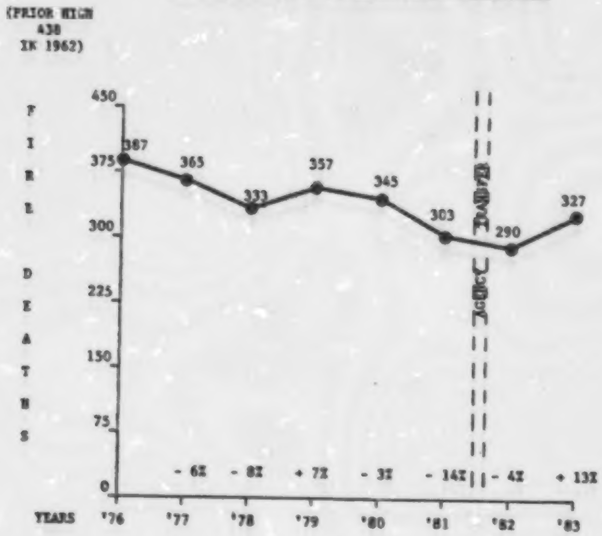
Pittsburgh

ATTACHMENT #22

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

STATE

FIRE COMMISSIONER'S OFFICE



FIRE DEATHS IN PENNSYLVANIA

SINCE INCEPTION OF

STATEWIDE FIRE FOCAL POINT

NOTE: THE REDUCTION IN FIRE DEATHS DURING THE PAST SEVEN YEARS HAS RESULTED IN A DECREASE OF 15%.

AE/CHB/K
01/23/85

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PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

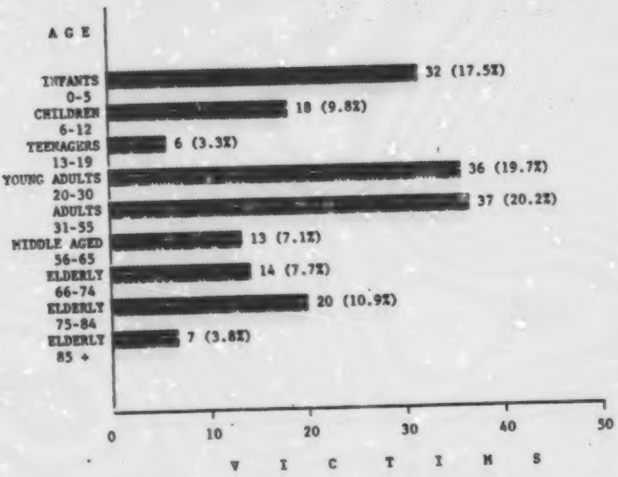
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

A.1

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

AGE OF FIRE DEATH VICTIMS

1983



AH/CH7/A
11/13/84

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

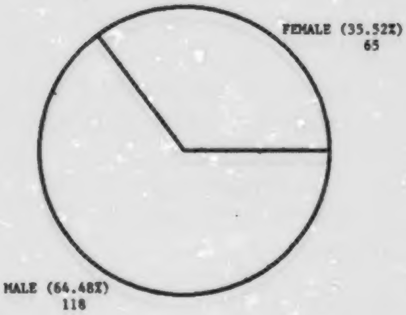
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

A.2

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

SEX OF FIRE DEATH VICTIMS

1983



AH/CH7/B
11/13/84

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

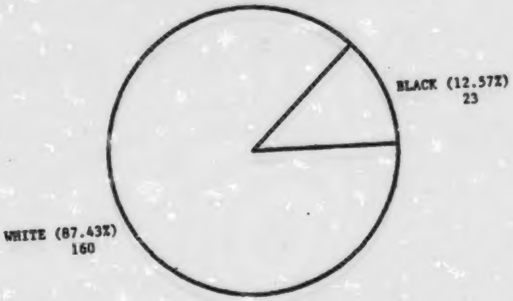
183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

A.3

RACE OF FIRE DEATH VICTIMS

1983



AH/CH7/C
12/04/84

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

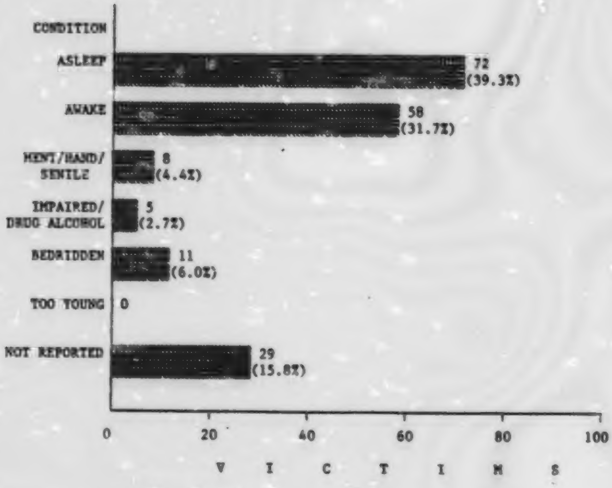
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

A.4

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

CONDITION BEFORE DEATH FROM FIRE

1983



AH/CH7/D
12/03/84

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

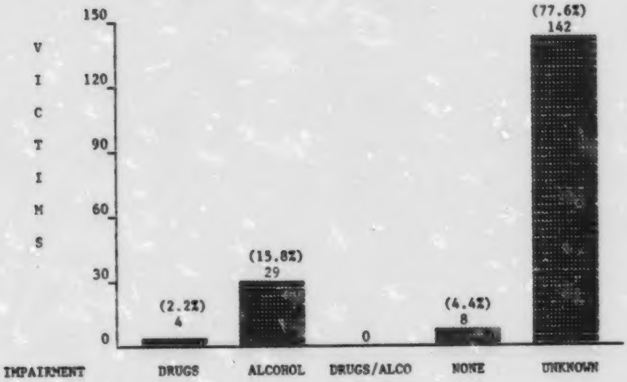
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

A.5

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

DRUGS/ALCOHOL PRESENT IN FIRE DEATH VICTIMS

1983



NOTE: 18% OF VICTIMS WERE EITHER DRUG OR ALCOHOL IMPAIRED

AH/CH7/E
11/13/84

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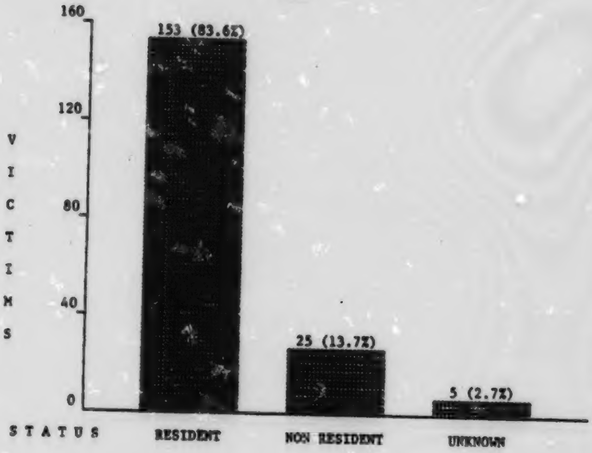
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

A.6

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

DID FIRE DEATH VICTIM RESIDE IN FIRE BUILDING?

1983



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11/13/84

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
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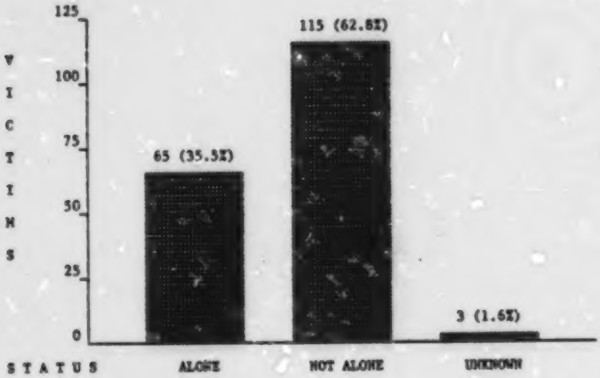
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

A.7

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

WAS FIRE DEATH VICTIM ALONE AT TIME OF FIRE?

1983



AH/CH7 G
11/13/84

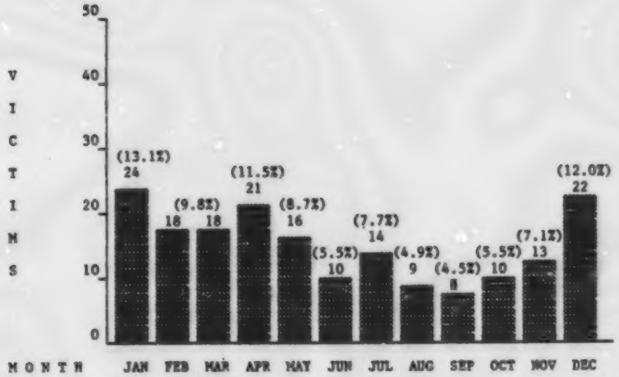
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

B.1

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

MONTH OF FIRE DEATH INCIDENTS

1983



PERIOD	SEASON	DEATHS	PERCENT OF ALL DEATHS
(MAR - MAY)	SPRING -	55	30.0%
(JUN - AUG)	SUMMER -	33	18.0%
(SEP - NOV)	FALL -	31	16.9%
(DEC - FEB)	WINTER -	64	34.9%

AH/CH7/M
11/13/84

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
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(717) 783-8150

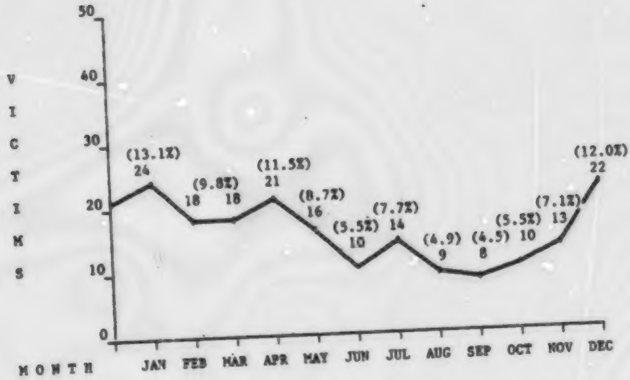
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

B.2

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

MONTH OF FIRE DEATH INCIDENTS

1983



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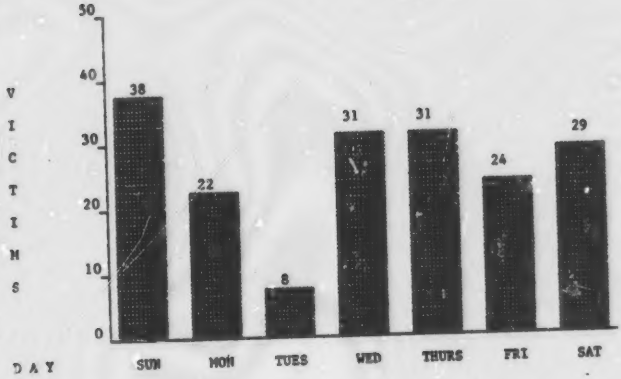
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

B.3

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

DAY OF FIRE DEATH INCIDENTS

1983



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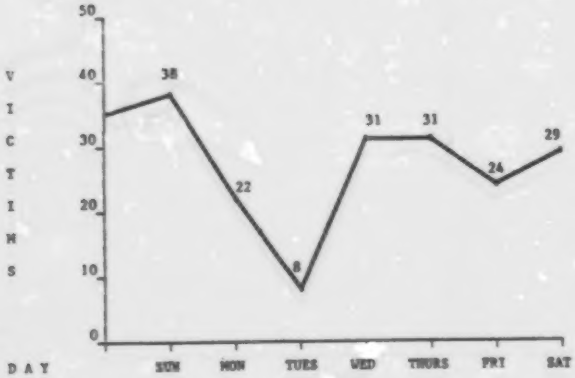
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

B.4

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

DAY OF FIRE DEATH INCIDENTS

1983



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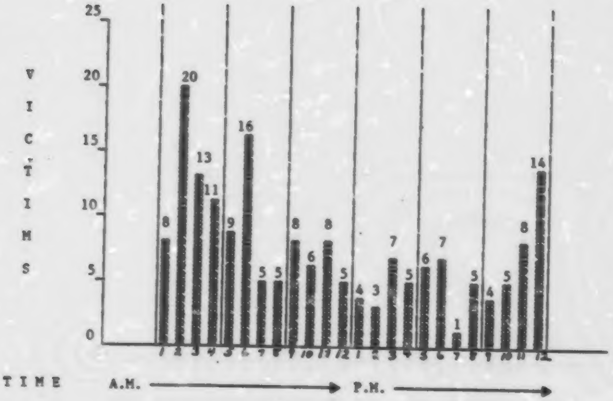
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

B.5

193 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

TIME OF FIRE DEATH INCIDENTS

1983



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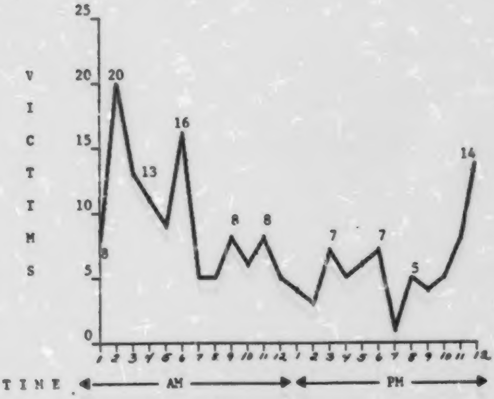
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

B.6

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

TIME OF FIRE DEATH INCIDENTS

1983



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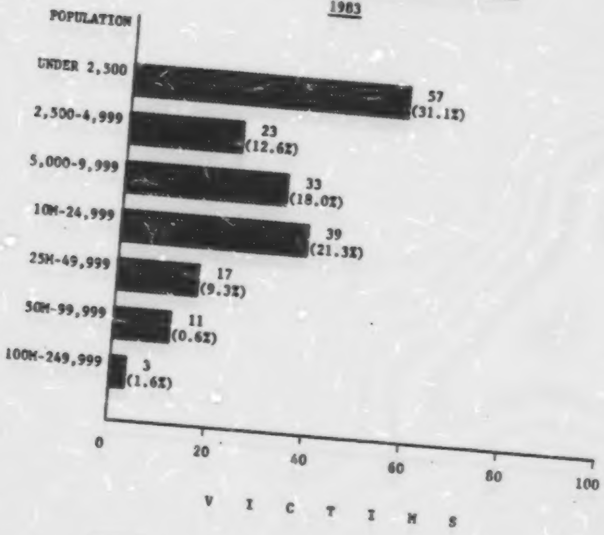
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

C.1

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

POPULATION OF PLACE OF FIRE DEATH INCIDENTS

1983



NOTES:

61.7% OF DEATHS OCCURRED IN TOWNS WITH UNDER 10,000 POPULATION (113)

83% OF DEATHS OCCURRED IN TOWNS WITH UNDER 25,000 POPULATION (152)

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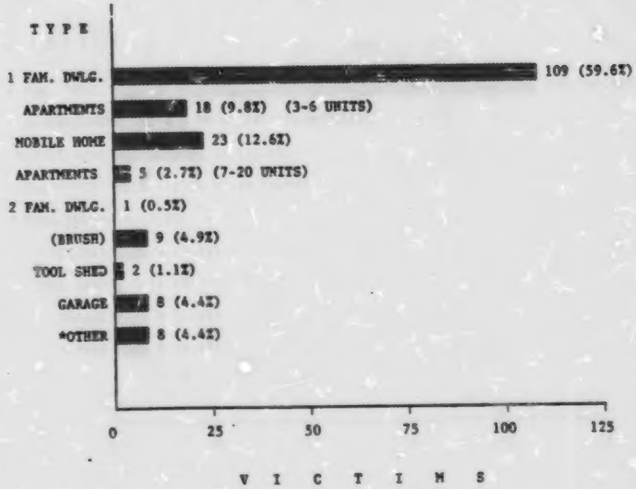
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

C.2

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

PROPERTY TYPE IN WHICH FIRE DEATHS OCCURRED

1983



NOTES: 85.7% OF ALL DEATHS OCCURRED IN RESIDENCES (157)

60.1% OF ALL DEATHS OCCURRED IN 1 OR 2 FAMILY DWELLINGS (110)

12.5% OF ALL DEATHS OCCURRED IN APARTMENT UNITS (23)

*INCLUDES BUS, TRUCK, NURSING HOME, DORMITORY, CHEMICAL MANUFACTURING, CORN CRIB, RESIDENTIAL GARAGE.

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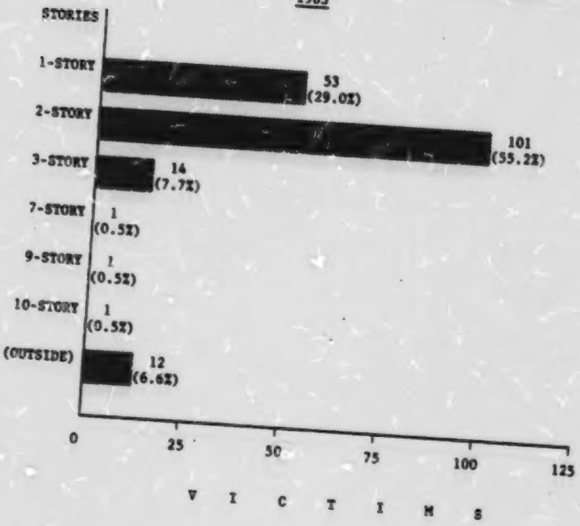
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

C.3

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

NUMBER STORIES IN BUILDING INVOLVED IN FIRE DEATH INCIDENTS

1983



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PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

C.4

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

FIRE DEATH VICTIM LOCATION

1983

AREA

FIRE BEGAN			VICTIM FOUND		
NUMBER	LOCATION	PERCENT	NUMBER	LOCATION	PERCENT
89	*BEDROOM	48.6%	65	*BEDROOM	35.5%
23	*LIVING ROOM	12.6	25	*LIVING ROOM	13.7
15	KITCHEN	8.2	15	KITCHEN	8.2
17	*FIELD/YARD	9.3	28	*FIELD/YARD	15.3
2	*GARAGE	1.1	1	*GARAGE	0.5
1	PROCESS AREA	0.5	1	PROCESS AREA	0.5
28	*UNKNOWN	15.3	19	*UNKNOWN	10.4
2	BATH	1.1	2	BATH	1.1
2	*ATTIC	1.1	1	*ATTIC	0.5
2	*OUTSIDE PORCH	1.1	5	*OUTSIDE PORCH	2.7
1	*FURNACE ROOM	0.5	2	*FURNACE ROOM	0.1
1	MOBILE FUEL TANK	0.5	1	MOBILE FUEL TANK	0.5
			16	*HALLWAY	8.7
			1	*DINING ROOM	0.5
			1	*LAUNDRY ROOM	0.5

FLOOR

FIRE BEGAN			VICTIM FOUND		
NUMBER	LOCATION	PERCENT	NUMBER	LOCATION	PERCENT
74	*GROUND 1ST FLOOR	40.4%	81	*GROUND 1ST FLOOR	44.3%
65	*2ND FLOOR	35.5	59	*2ND FLOOR	32.2
9	*3RD FLOOR	4.9	4	*3RD FLOOR	2.2
1	*OVER 4TH	0.5	2	*OVER 4TH	1.1
1	*BASEMENT	0.5	7	*BASEMENT	3.8
27	*UNKNOWN	14.8	30	*UNKNOWN	16.4

* **NOTE:** 69 OR 37.7% PERSONS SHOWED SOME MOVEMENT IN TRYING TO ESCAPE.

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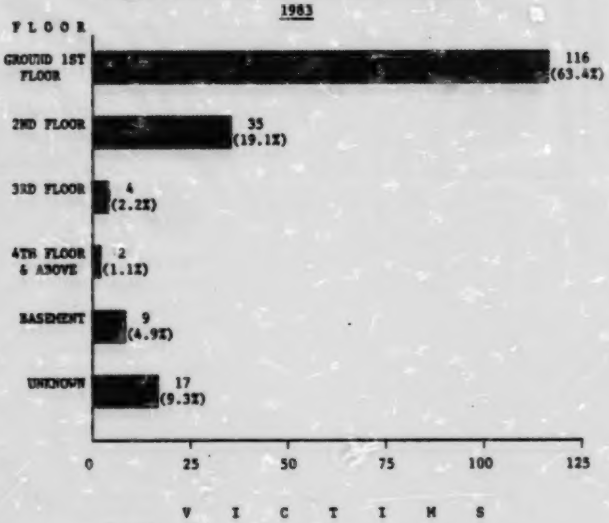
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

C.5

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

ORIGIN OF FIRE IN EVALUATED FIRE DEATH INCIDENTS

1983



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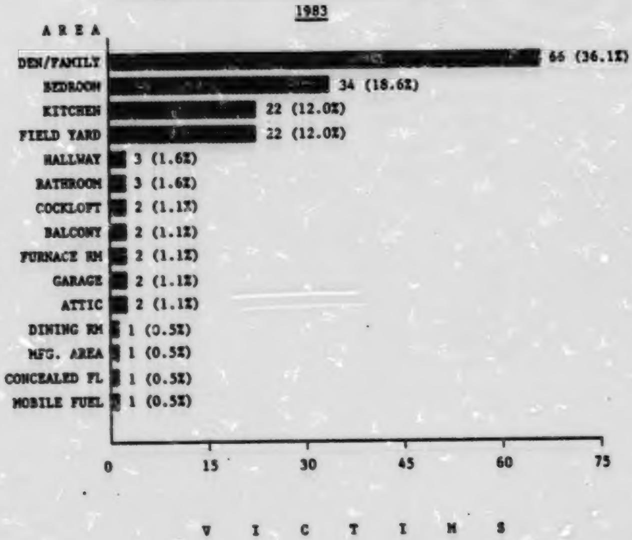
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

C.6

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

ORIGIN OF FIRE IN EVALUATED FIRE DEATH INCIDENTS

1983



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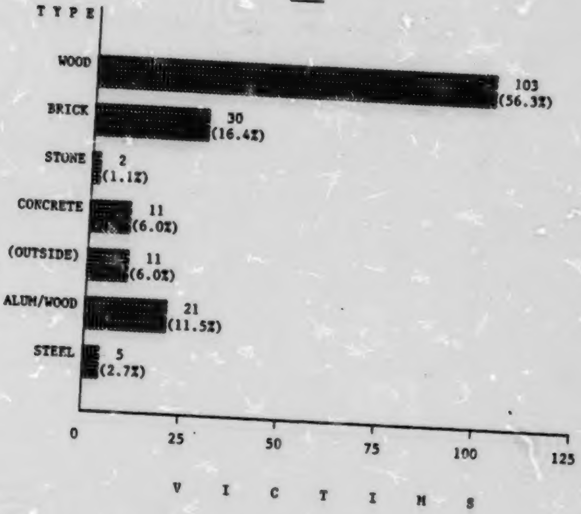
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

C.7

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

CONSTRUCTION OF BUILDING INVOLVED IN FIRE DEATH INCIDENTS

1983



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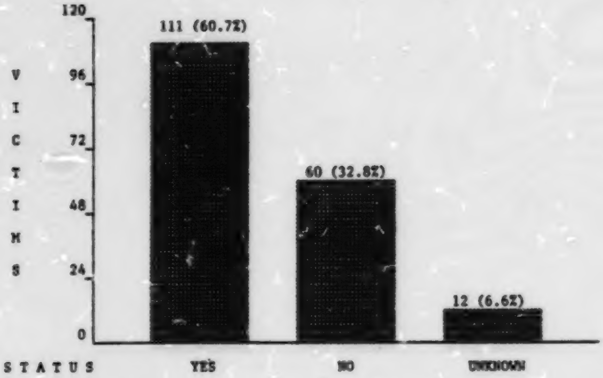
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

C.8

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

WERE BUILDINGS OF FIRE DEATH INCIDENTS OWNER/OCCUPIED?

1983



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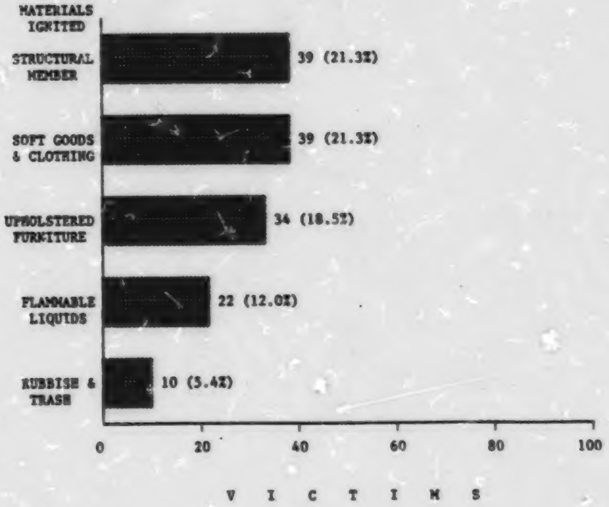
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.1

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

LEADING FIRE DEATH INCIDENT SCENERIOS
MATERIALS IGNITED
1983



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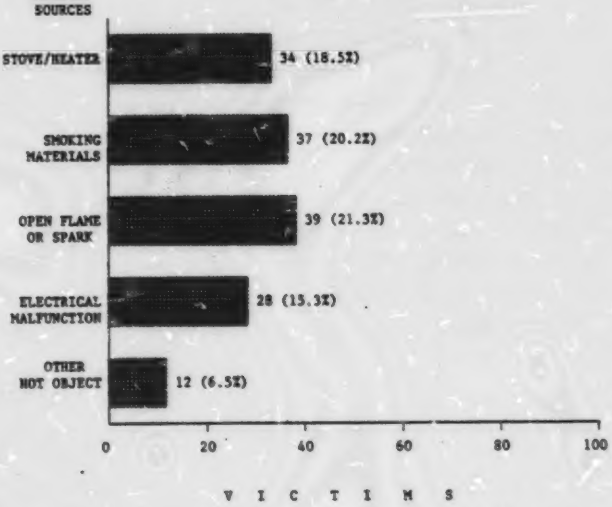
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.2

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

LEADING FIRE DEATH INCIDENT SCENERIOS
SOURCES OF IGNITION
1983



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11/15/84

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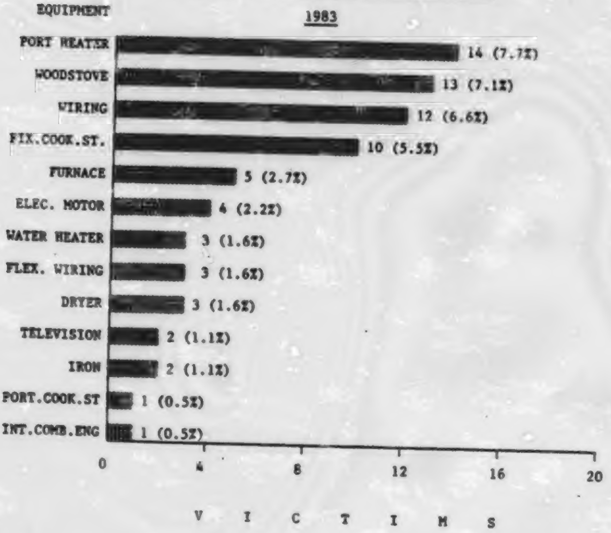
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.3

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

EQUIPMENT INVOLVED IN FIRE DEATH INCIDENTS

1983



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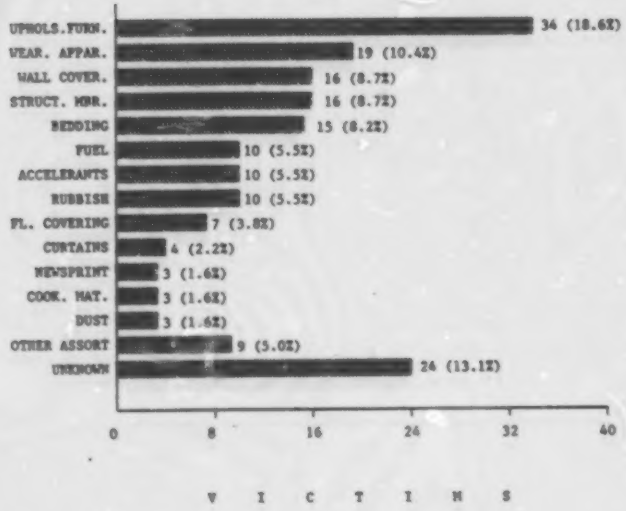
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.4

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

GENERAL FORM OF MATERIAL IGNITED IN FIRE DEATH INCIDENTS

1983



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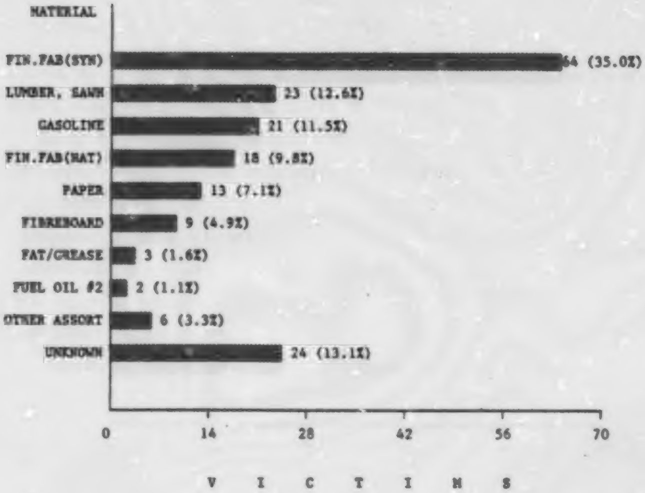
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.5

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

SPECIFIC TYPE OF MATERIAL IGNITED IN FIRE DEATH INCIDENTS

1983



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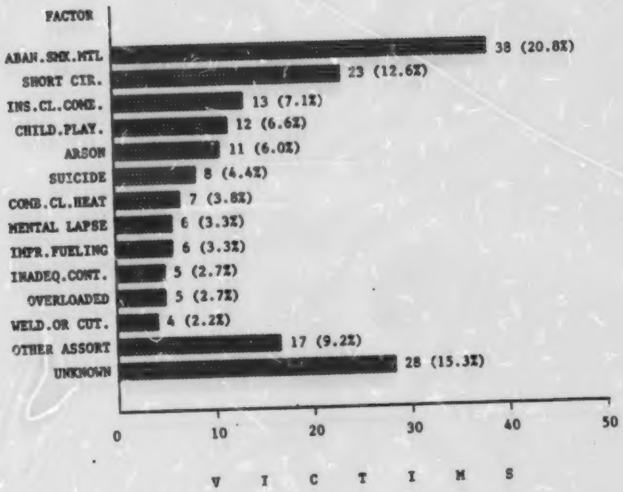
FIRE DEATH DATA
BEHAVIORAL STUDY

D.6

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

CAUSE OF IGNITION IN FIRE DEATH INCIDENTS

1983



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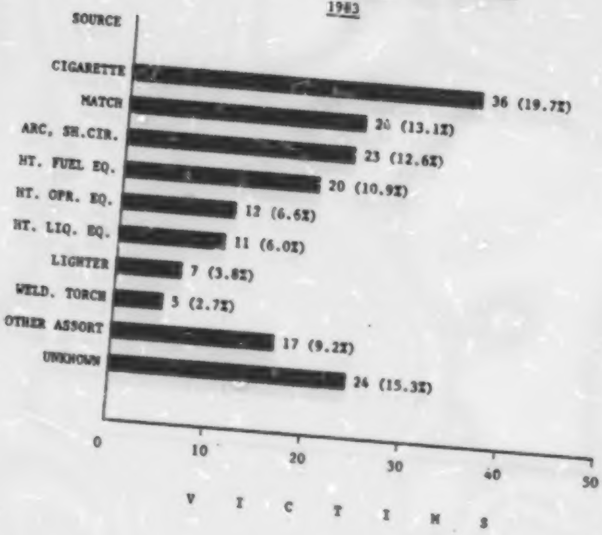
FIRE DEATH DATA
BEHAVIORAL STUDY

D.7

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

SOURCES OF IGNITION IN FIRE DEATH INCIDENTS

1983



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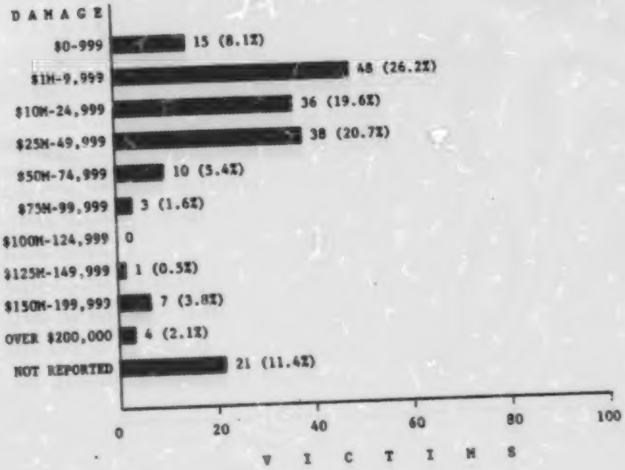
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.8

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

DAMAGE TO FIRE BUILDING & CONTENTS INVOLVED IN FIRE DEATH INCIDENTS

1983



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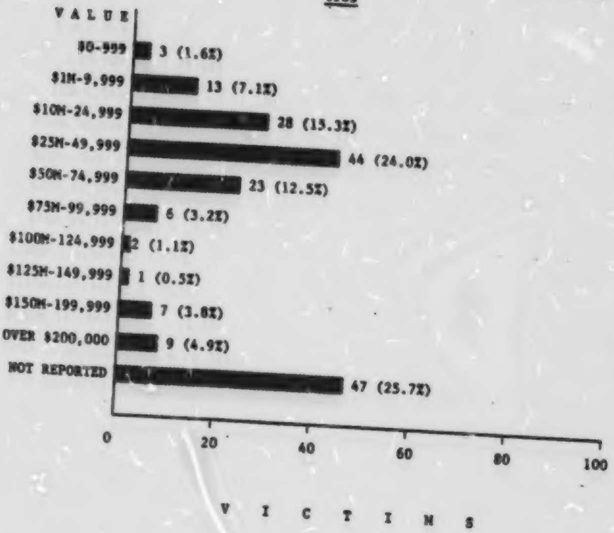
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.9

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

VALUE OF FIRE BUILDING & CONTENTS INVOLVED IN FIRE DEATH INCIDENTS

1983



NOTE: PA
$39,100 AVERAGE VALUE HOUSING U.S. CENSUS
1980 CENSUS OF HOUSING, SUPP. REPORTS
SERIES 4(80-31)

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12/04/84

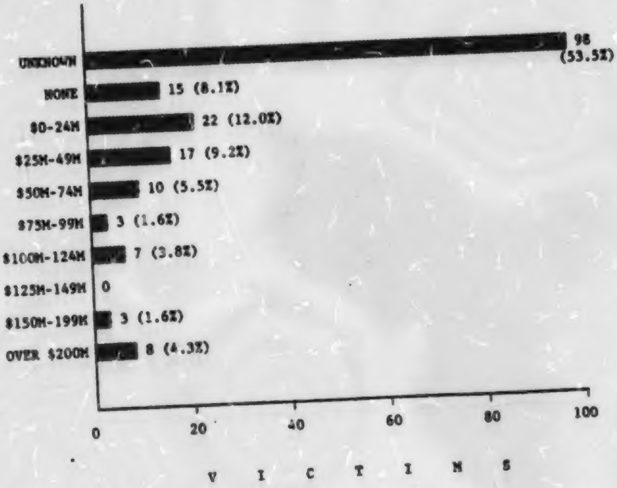
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.10

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

INSURANCE ON BUILDING/CONTENTS INVOLVED IN FIRE DEATH INCIDENTS

1983



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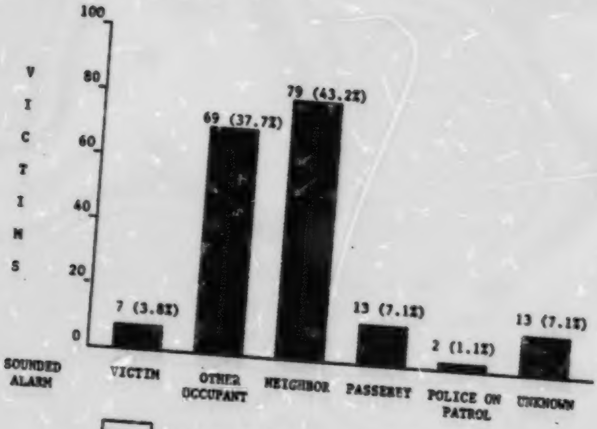
PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

D.11

183 DEATHS FROM
ALL PA COUNTIES
EXCEPT PHILA./ALLEG.

WHO REPORTED FIRE IN FIRE DEATH INCIDENTS?

1983



NOTE: 84.7% OF ALL FIRES INVOLVING DEATHS WERE REPORTED BY PERSONS LIVING IN, OR NEXT TO, BUILDING OF FIRE.

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PENNSYLVANIA
FIRE DEATH DATA
BEHAVIORAL STUDY

E.1

183 DEATHS FROM
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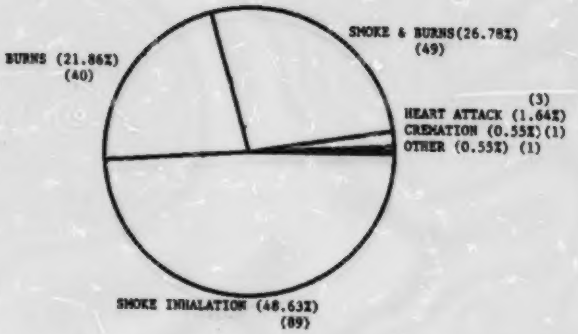
CAUSE OF DEATH TO VICTIMS OF FIRE

1983



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FIRE DEATH DATA
BEHAVIORAL STUDY

E.2

183 DEATHS FROM
ALL PA COUNTIES
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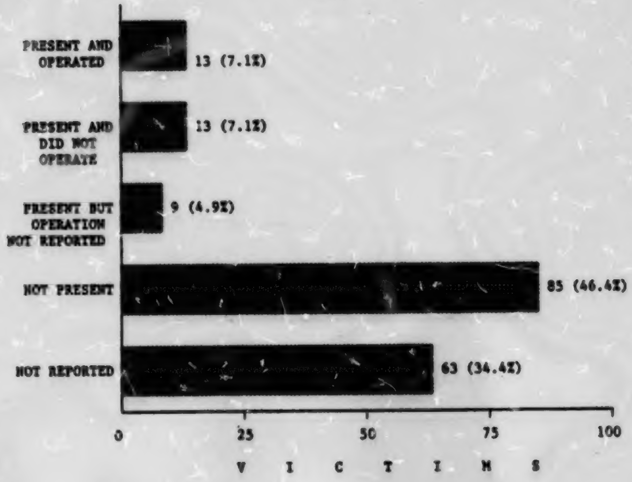
WERE SMOKE DETECTORS PRESENT AT FIRE DEATH INCIDENTS?

1983



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Fl/v

July, 1984

BIOGRAPHY OF CHARLES A. HENRY

State Fire Commissioner

State Fire Commissioner Charles A. Henry began fighting the war he wages against fire when he was 16, a green but enthusiastic volunteer at the Paxton firehouse — an interest which was to develop into a wide background of technical and administrative fire service experience.

"Chet" started his paid career as a Firefighter for the City of Harrisburg, Pennsylvania, in 1953, and was promoted to the rank of Battalion Chief in 1965. Advancement to the bureau's administrative ranks came in 1967, when he was appointed Assistant Chief and Training Director. In that dual capacity, he was responsible not only for administrative functions, but for the development and instruction of classroom programs and training evolutions in all phases of fire suppression. During that time, he gained wide recognition for his special fire prevention training programs for personnel in business and industry as well as hospitals and nursing homes. In January, 1972, Henry was appointed Chief of the Harrisburg Bureau of Fire, with total responsibility for the department's operations and its $1.33MM budget. He was the youngest man ever to be appointed Chief, and he served in that office, directing its administrative, fire prevention and suppression activities, until December of 1976 when he retired from the City of Harrisburg with 23 years of paid service.

On December 2, 1976, Henry became Pennsylvania's first State Fire Commissioner and was charged with the development of a cost-effective fire loss management system. Accordingly, he develops programs of information and education designed to create a total public awareness of fire safety; administers the federal grants awarded to his office; disseminates information about fire prevention and control techniques; serves as a liaison with the Pennsylvania General Assembly on matters relating to fire safety and to firefighters; acts as a central contact to serve local and statewide interests in matters pertaining to fire prevention and control, and publishes a quarterly newsletter, the FIRE CRIER, which is disseminated to every paid and volunteer fire company in the Commonwealth. His function was transferred to the Pennsylvania Emergency Management Agency on July 1, 1981, at which time he was given the added responsibility for the State Fire School and the Volunteer Loan Assistance Program.

During his long fire service career, Henry has attended management courses, workshops and seminars at the Philadelphia Fire College; the Pittsburgh Fire Academy; the University of Maryland, and the Pennsylvania State University. He is a member of the International Association of Fire Chiefs; a Director at Large of the International Association of Fire Service Instructors, and a Trustee of the National Fire Protection Association Research Foundation. Henry has been the recipient of several area community service awards; serves on the Advisory Council of the Harrisburg Area Community College, and currently serves as Chairman of the Governor's Interagency Committee on Arson as well as the Pennsylvania Fire Service Professional Qualifications Board.

ATTAC[illegible] 8

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HENRY9/f/sak

FACT SHEET

October 9, 1985

Activity: Special Demonstrations at 1985 Home Builders Show

Purpose: The Office of Fire Safety Services recently completed a series of unique demonstrations to prove the speed and effectiveness of new residential fire sprinkler systems. The demonstrations were provided in conjunction with a national and statewide campaign for fire-safe homes through the use of home fire protection systems.

Show Manager:
Glenn Attick
Home Builders Association of
Metropolitan Harrisburg
4409 North Front Street
Harrisburg, Pennsylvania 17110

FEMA Contact:
Andy Giglio
U.S. Fire Administration
National Emergency Training Center
Emmitsburg, Maryland 21727

PEMA Contact:
Charles A. Henry
State Fire Commissioner
Pennsylvania Emergency Management Agency
Office of Fire Safety Services
Post Office Box 3321
Harrisburg, Pennsylvania 17105

Required Materials: Forty (40) Sprinkler Heads

Forty (40) Pairs of Drapery Materials
Five (5) Bolts of Cotton Muslin, 60" Wide x 20 Yards Long, Made Into Panels 4' x 5'.

TV Monitor
VCR (VHS Format)

Cost of Material: $83.30

Demonstrations Held:	Date	Number of Demos	Operators
	03/02/85	5	(Henry); Wessel; Rickenbach
	03/03/85	5	(Henry); Wessel; Rickenbach
	03/04/85	3	(Henry); Wessel; Rickenbach
	03/05/85	3	(Henry); McCaa; Rickenbach
	03/06/85	3	(Henry); McCaa; Rickenbach
	03/07/85	4	(Henry); McCaa; Wessel
	03/08/85	4	(Henry); McCaa; Wessel
	03/09/85	5	(Henry); Wessel; Rickenbach
	03/10/85	5	(Henry); Wessel; Rickenbach
Totals:	9 Days	37 Demos	2 - 3 Operators

Audience: Approximately 2,000 persons attended the demonstrations, and an additional 60,000 persons heard the promotional messages produced over the public address system.

Future Participation: The Office of Fire Safety Services has been invited to participate in the 1986 Home Builders Show with the residential sprinkler trailer on an expanded basis.

ATTACHME

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

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FACT SHEET

October 9, 1985

Activity: Fire Service Teleconferences

"Universe of Knowledge": The National Fire Protection Association sponsored a teleconferencing series entitled "A Universe of Knowledge" consisting of 22 separate television segments encompassing the most current fire service educational topics. The "Universe" programs were carried via satellite (Westar IV) through May 21, 1984 at the rate of one per week, and gave firefighters throughout the United States the opportunity of taking advantage of this wealth of knowledge at the least possible expense. On behalf of the Pennsylvania fire service, Fire Commissioner Charles Henry made arrangements through WITF-TV Harrisburg (Channel 33) to obtain a set of master tapes at no charge, there being no restrictions against such activity. From those tapes, the OFSS duplicated, in house, additional tapes which could then be loaned out upon request to the various fire companies. The blank tapes were the only expense and came from the State Fire Commissioner's budget.

Microcomputers: The Office of Fire Safety Services participated in a one-day Teleconference on "Microcomputers for the Fire Service" sponsored by the Federal Emergency Management Agency's National Fire Academy on January 24, 1984 and invited an additional ten (10) participants from throughout the Commonwealth to attend. The teleconference, which featured management applications for microcomputers in fire departments and emergency medical services agencies, was beamed by satellite to training sites in each of FEMA's ten regions located throughout the United States, with Pennsylvania included in Region III (Philadelphia). The counties represented from Pennsylvania included Bucks; Chester: Dauphin: Lancaster: Mercer: Montgomery; Westmoreland, and York.

Arson: The Office of Fire Safety Services participated in a one-day teleconference on "Innovations in Arson Prevention" on February 28, 1984. Training was conducted at The Institute of Pennsylvania Hospitals, 111 North 49th Street, Philadelphia, PA and was sponsored by the Federal Emergency Management Agency. The teleconference was transmitted by Westar IV Satellite, Transponder 12 Direct, to training sites in each of FEMA's ten regions located throughout the United States. A two-way audio bridge enabled direct communications with the hosts and speakers. Fire Commissioner Charles Henry extended invitations to members of the Governor's Interagency Committee on Arson and others who would benefit by attending.

1985-1986 Series: The Office of Fire Safety Services, through the Federal Emergency Management Agency and its National Fire Academy, is participating in the series of six teleconferences for 1985 and 1986 on fire related issues.

The first teleconference in the series, on September 12, deals with hazardous materials and places emphasis on first responders at a chemical spill. Firefighter health and safety will be stressed in the second teleconference scheduled for October 16. Discussions will focus on protective clothing for use at structural fires and for use in dealing with hazardous materials. Fire service management will be the subject of the November 13 telecast. Organizational development, sharing information and micro-computer linkups will be among the topics aired.

The December 11 teleconference will deal with civil and criminal legal issues relating to arrests and prosecutions of arsonists. The telecast on February 12 will address public fire education; we will invite our Statewide Fire Prevention Coordinating Team and the Task Force on Fire Safety Education. To those who cannot attend, we will offer the use of our copy of the videotape when it is received.

The closing Emergency Education Network telecast, March 12, will deal with the issue of residential sprinkler systems, how they impact upon the fire service, insurance and building-related industries.

ATTACHMENT #10

PENNSYLVANIA EMERGENCY MANAGEMENT AGENCY
P.O. BOX 3321
HARRISBURG, PENNSYLVANIA 17105
(717) 783-8150

HENRY9/0/ssk

FACT SHEET

October 9, 1985

Activity: Proposed Sprinkler Workshop and Burn Demonstration

Background: In June, 1985, a meeting was held in the State Fire Commissioner's Office office to discuss a proposed demonstration burn in the City of Harrisburg and a related one-day Residential Sprinkler Seminar to be held in the future. Present at the meeting at his invitation were Joseph McCarey, Fire Representative of the Federal Emergency Management Agency's Region III in Philadelphia; M.G. Myers of the Central Sprinkler Corporation of Lansdale, Pennsylvania; Ephraim Scheier of the R & G Sloane Company of Philadelphia, Pennsylvania, as well as Donald Konkle, Chief of the Harrisburg Fire Department.

Proposed Program: Using two houses to be made available by the City of Harrisburg, it was intended to equip just one of the houses with a residential sprinkler system and then set fire to both of them to demonstrate the vast difference in the resulting damage. The houses built in 1974 and located in the flood plain, were scheduled to be razed. It was planned that invitations would be sent to a select list of local government officials, code enforcement officers and fire chiefs, so that those decision-makers would become more knowledgeable about the newest technology in quick-acting, residential sprinkler systems. Plans progressed and a date, September 27, 1985, was selected. Conference room reservations were made and a letter of confirmation was received from the Central Sprinkler Corporation indicating joint participation of that company and the R & G Sloane Company in providing an installed sprinkler system in the HUD house as well as refreshments for approximately 100 persons.

Mr. **Walgren**. Thank you very much for that real description. I appreciate that as background for understanding what's going on out there.

Mr. **Boehlert**. Mr. Chairman, can the record show that Mr. Henry's presentation was made with a great deal of enthusiasm? [Laughter.]

Mr. **Walgren**. And not a great deal of Federal money.

The next is Anthony Granito, superintendent at the vocational education and extension board of the county of Nassau. Mr. Granito, welcome to the committee.

STATEMENT OF ANTHONY R. GRANITO, SUPERINTENDENT, FIRE PROGRAM, VOCATIONAL EDUCATION AND EXTENSION BOARD, COUNTY OF NASSAU, NY

Mr. **Granito**. Thank you, Mr. Chairman and members. It is my pleasure to appear before this Subcommittee on Science, Research and Technology to discuss the problem of residential fire fatalities and injuries. Since the purpose of this hearing is to examine the programs and interrelationships of the fire service in local agencies as well as the private sector, I will limit my remarks to those activities which have directly affected the fire prevention and public education efforts in Nassau County, NY.

I am pleased to say that the directions recently taken by the U.S. Fire Administration reestablish a Federal effort in targeting audiences to fire prevention and are a renewal of the original goals, in my opinion, that were set forth in the commission report, "America Burning." The new Federal initiative focusing fire prevention programs to specific target audiences is exactly the initiative that we have taken in Nassau County which, I am pleased to say, is working effectively.

We in Nassau County have looked to the Federal Government for program support in two specific areas: model programs that can be tried in other localities and can be easily replicated within our own jurisdiction, and training programs that are offered at the National Fire Academy that will enhance our staff's ability to deliver effective public fire education programs within the county. I would add that one of the effective roles of the National Fire Academy has been to develop a specific awareness to the merits of fire prevention education that positively affect the students in attendance. This new interest in fire prevention education makes the job of gaining support for fire prevention measures much easier because the National Fire Academy graduates are coming back to the localities as strong advocates of fire prevention.

Specifically, the U.S. Fire Administration has helped Nassau County by, in part, funding a video program that we entitled "Second to None," which allows the fire service in the county to present an effective message to the general public that explains the service, its programs, and essentially where tax dollars are being allocated. Nassau County is a diverse urban population of close to 2 million people, served almost entirely by 100 percent volunteer fire service. In the past 5 years we have attempted to analyze our problems of fire safety by looking at fire incidents, including fatalities and injuries, and targeting our fire prevention activities into those high-risk groups, the areas in which most fatal fires occur—in our case, the single-family dwelling.

In the period 1981 to 1984, our statistics show that 23 percent or 19 fatalities occurred with young children and young adults. During the same time period, 26 fatalities or approximately 32 percent occurred with the senior citizen population. It became obvious to us that our two primary targets should be the young and the old.

In 1981 we instituted a program of public fire safety education for our school children. We have approximately 200,000 school children in public and nonpublic schools. This student population is served by approximately 8,000 public and nonpublic school teachers. To date, I am pleased to say that 87 percent of this population is actively involved on a week-to-week basis with the NFPA's "Learn Not To Burn" program for the elementary school children and "Fire Safety for Rest of Your Life" in the secondary schools.

The Nassau County responsibility is to provide materials, technical support, expert staff, and audiovisual aids to the school districts, working in conjunction with the local fire departments. Our staff of 20 professionals works continuously in the school program area, which is totally funded by Nassau County. Our goal by the end of calendar year 1986 is to have all school children, regardless of age, involved in the "Learn Not To Burn" and "Fire Safety for the Rest of Your Life" programs.

One obvious question is, "How successful have you been and how successful will you be?" In order to determine the effectiveness of our program, we have introduced a fire safety education and evaluation survey. This evaluation program is now ongoing in the county and providing information that will enable us to provide more effective programs in the future. This program is designed to identify strengths and weaknesses in the area of fire education.

The purpose of this evaluation instrument is to measure the present level of student knowledge, as well as assist in setting goals and priorities for survival. We developed this survey as part of an ongoing program aimed at implementing more effective and efficient fire safety programs throughout the county, and I might add that I have developed a more detailed analysis of this program in my testimony, which I would like to cut short so we can show you a little portion of the Firecare Program.

The other target group is the senior citizen population in Nassau County, which incidentally now exceeds the school-age population, is approximately 240,000, and is continuing to grow. We have developed a comprehensive program entitled "Firecare," and I will take the opportunity to show you a very brief portion of Firecare at the conclusion of my testimony. This program has been prepared with these things in mind: The natural biological and emotional changes that accompany the aging process and the varying degree of diminished physical abilities of the elderly.

Each Firecare kit includes detailed suggestions to effectively promote the program locally, a guide for conducting workshops for senior citizens, a recommended workshop schedule, background information, and a list of workshop activities for each unit, and three 20-minute slide presentations with audio tapes. The program has been organized into three units, each addressing high-priority areas of fire safety. The units can stand alone or be scheduled as a series.

This program has been prepared by fire and educational professionals, reviewed by a senior citizens' advisory panel, and has undergone extensive field testing. Firecare was developed by the Nassau County Public Fire Safety Education Division in conjunction with the Pennsylvania Office of Fire Safety Services. Firecare will be presented to the 240,000-plus senior citizens throughout the county by utilizing participants from the Retired Senior Volunteer Program [RSVP] as well as our own instructors. It is our goal to conduct at least two firecare programs in every senior citizen center over the next 15 months. And, parenthetically, we have 260 senior citizen centers. The packages will then be retained by the senior citizen centers so they can be utilized on a regular basis.

We have been fortunate in Nassau County to have been supported both financially and technically in the development of firecare and the evaluation survey by a grant from the Tobacco Institute fire prevention programs. We feel that part of the Federal Government's role in the future should be to assist localities in leveraging more interaction with the private sector. The job of fire prevention education cannot be left alone, solely to the public sector agencies. Coordinated efforts between the public and private sector will maximize community interest and awareness.

Additional efforts of promoting residential sprinkler programs without diminishing the role of smoke detector systems will perhaps, in the long run, be the most effective panacea for reducing fatalities and injuries in single-family dwellings. However, we are interested in the short term as well. New media, such as teleconferencing through the National Fire Academy and the U.S. Fire Administration and the availability of information on international fire safety comparisons, have created a general awareness of public interest not seen in the past.

The fire service, through educational efforts and an increased awareness of its role in public education, gives us a golden opportunity to institutionalize public fire safety education. This effort requires the combined imagination and financial support of as many public and private sector sponsoring agencies and individuals who are willing to cooperate.

I would like to take this time to show a very brief segment of our Firecare Program, with your permission.

[A short videotape presentation was made.]

Of those who lose their lives in fire each year are over the age of 60. Through self-education on fire safety procedures we can prevent this senseless loss of life. This fire safety program, "Firecare," has been designed especially for America's older citizens. It is a series of presentations on the most important fire-related problems the elderly face. They explain the safe and proper actions you should take.

We are proud that you have taken care of yourself and enjoyed a long life, and we want to keep it that way. We would like to begin with some thoughts you may already know.

Most fire-related deaths and injuries can be prevented. In a fire, smoke and toxic gases move swiftly throughout a structure, killing more people than the fire itself. Victims can be overcome by the smoke or gas even before they realize they are in trouble.

Eighty percent of all fire victims are killed by fires that occur in their homes and apartments. Many of these victims would still be alive today if they had installed a smoke detector.

Smoke detectors sense fires in their early stages and provide an early warning. With the margin of safety provided by this early-warning signal, and preplanned, practiced escape routes, your chances of surviving a fire are greatly enhanced.

Statistics show you are more than twice as safe from the threat of a fire if you have a detector in your home. Despite the fact that more than 10 million smoke detectors are sold in the United States each year, more than 25 States have found it necessary to enact laws requiring smoke detectors.

Basically, there are two types of smoke detectors for home use, both of them effective, the photoelectric detector and the ionization detector. They generally cost under $50 with many in the $10 to $15 range. The photoelectric detector relies on a light source in a darkened chamber. With this type of detector, the alarm is triggered when smoke enters the darkened chamber and reflects the beam of light onto a light-sensitive cell. The photoelectric detector is most sensitive to smoking, smoldering fires.

The ionization detector uses a radioactive material that lets air within its chamber conduct electricity. The alarm sounds when smoke enters the chamber and interrupts the flow of the electrical current. The radiation source used in the ionization chamber is tiny and has been found to pose no health hazard whatsoever. This type of detector is more sensitive to fast-burning fires which produce little smoke.

You are probably wondering what type of smoke detector best meets your home needs. The National Bureau of Standards has concluded that, if properly installed and maintained, both types of detectors are about equal in lifesaving potential, since most home fires produce visible and invisible smoke particles.

Most smoke detectors are available in battery and electric powered versions. Keep in mind that most battery-powered units are designed to operate for one year per battery. Use a birthday or anniversary to remind you to change the battery.

If you select a battery-powered detector, it will produce a beeping sound periodically as the battery weakens. Some units have a red flag to signal a weak battery. Other smoke detectors, designed for the hearing-impaired, are interconnected with a powerful strobe light or vibrating bed which can even wake a sleeping person.

Electric powered smoke detectors are equipped with a cord which plugs into an electrical outlet. If you select this type of unit, be certain the outlet you use cannot be turned off by a wall switch. Some electric smoke detectors are directly wired into the home electrical system, requiring the services of a licensed electrician. A wise safeguard to use with electric powered detectors is a battery backup which works automatically in case of an electrical power failure.

Any detector you choose should have a product safety seal of approval, such as the Underwriters Laboratory seal. Once you have selected the type of smoke detector you are most comfortable with, the next step is placing it in an effective location.

Toxic gases and heat produced by a fire rise until they reach an obstacle such as a ceiling, then spread across the ceiling until they reach the wall. Once the ceiling is covered, smoke begins to fill the room and the smoke level moves downward. This is precisely why fire officials urge you to drop to your hands and needs, should you encounter smoke, and crawl to the nearest exit. By using the 'crawl low in smoke' technique, you will get below the deadly heat and smoke.

Since smoke and heat rise . . .

[The videotape was stopped by Mr. Granito.]

Mr. **Granito**. I might add, in closing, this short segment is representative of the design of the program. The intent is, since the population to be served is so large, to try to make the program freestanding so that senior citizen centers can take the materials and use them on a regular basis.

I thank you very much for the opportunity to testify.

[The prepared statement of Mr. Granito follows:]

NASSAU COUNTY FIRE SERVICE ACADEMY
OFFICE OF THE SUPERINTENDENT
899A JERUSALEM AVENUE • UNIONDALE, NEW YORK 11553 • (516) 292-9292

ANTHONY GRANITO
Superintendent

Testimony
before
U.S. House of Representatives
Subcommittee on Science, Research and Technology
Hearing October 9, 1985
Rayburn House Office Building
Washington, D.C.

Anthony E. Granito
Superintendent, Fire Programs
Vocational Education and Extension Board
Nassau County, New York

VOCATIONAL EDUCATION AND EXTENSION BOARD

It is my pleasure to appear before the Subcommittee on Science, Research and Technology to discuss the problem of residential fire fatalities and injuries.

Since the purpose of this hearing is to examine the program and inter-relationships of fire service and local agencies as well as private sector fire programs, I will limit my remarks to those activities that have directly affected fire prevention and public fire education in Nassau County, New York.

However, I feel that I should take a moment to comment on some of the history of public fire prevention education in the U.S. and, specifically, the statements of need expressed in the late 1960s in the National Fire Prevention & Control Administration Commission Report America Burning.

Based on statistical analysis, the current assumption was made that a more positive public fire prevention awareness program should be initiated throughout the U.S., preferably under a fire agency sponsorship.

These activities became part of the program goal of the National Fire Prevention and Control Administration and later the U.S. Fire Administration in FEMA.

I am pleased to say that the directions taken recently by the U.S. Fire Administration which, in essence, credits a Federal effort in targeting audiences to fire prevention, is a renewal of the original goals setforth back in the late 1960s.

The new Federal initiative to present focused fire prevention programs to target audiences is exactly the initiative that we have taken in Nassau County which, I am pleased to say, seems to be working effectively.

We in Nassau County have looked to the Federal Government for program support in two specific areas:

(1) model programs that have been tried in other localities that can be easily replicated within our own jurisdiction;

(2) specific training programs that are offered at the National Fire Academy that will enhance our Staff's ability to deliver effective public fire education programs.

I would add that one of the effective roles of the National Fire Academy has been to develop a specific awareness to the merits of fire prevention education that positively effect the students in attendance. This new-found interest in fire prevention education makes the job of gaining support for fire prevention measures much easier because the National Fire Academy graduates are coming back to the locality as strong advocates for fire prevention.

Specifically, the U.S. Fire Administration has helped Nassau County by, in part, funding a video program entitled Second to None which allows the Fire Service in the County to present an effective message to the General Public that explains the service, its programs and, essentially, where tax dollars are being allocated. Much more, however, needs to be done.

It is my opinion that there was a brief period of time in which public education roles and activities of the U.S. Fire Administration were being diminished because of lack of Staff and appropriate funding. New initiatives now seem to indicate that fire prevention activities and programs have once again become a necessary priority.

* * * *

Nassau County is a diverse, urban population center served almost 100% by the Volunteer Fire Service.

In the last five years, we have attempted to analyze our problems of fire safety by looking at fire incidents (including fatalities and injuries) and targeting our fire prevention activities into those "high risk groups", i.e. in the area where most fatalities occur which, in our case, is the single family dwelling.

In the period 1981 through 1984, our statistics show that 19 fatalities occurred in residences which represents 23% of the total fatalities which occurred in the child/young adult population. During the same time period, 26 fatalities (or approximately 32%) occurred in the Senior Citizen population.

It has become obvious to us that our two primary targets should be the young and the old.

In 1981, we instituted a broad program of public fire safety eduction for our school children. We have approximately 200,000 school age children in public and non-public schools. This student population is served by approximately 8,000 public and non-public school teachers. To date, 87% of this population is actively involved (on a week to week basis) with the NFPA's Learn Not to Burn Program for the elementary schools and Fire Safety... for the Rest of Your Life for the secondary schools.

The Nassau County VEEB's responsibility is to provide materials, technical support, expert Staff and audio visual aids to the School Districts working in conjunction with the local Fire Departments.

Our Staff of 20 professionals works continuously in the school program area and is totally funded by Nassau County funds. Our goal, by the end of calendar 1986, is to have all school children (regardless of age) involved in our comprehensive programs. The obvious question is: "How successful is this program?"

Introduction
Fire Safety Education Evaluation

In order to determine the effectiveness of our program, we have introduced the **Fire Safety Education Evaluation Survey**. This evaluation program is now ongoing in the County and providing information that will enable us to provide more effective programs in the future.

FSEES was designed to identify strengths and weaknesses in the area of fire education. The purpose of this evaluation instrument is to measure the present level of student knowledge, as well as assist in setting goals and priorities for survival. The Nassau County VEEB Public Fire Safety Education Division developed this survey as part of an ongoing program aimed at implementing more effective and efficient fire safety programs through the County.

Statement of Nature and Purpose

The survey was designed to identify strengths and weaknesses in the area of fire safety and fire prevention education. Since people learn at different rates corresponding to age, background and experience, FSEES provides a comprehensive and sequential pattern of instruction accompanied by evaluation instruments that measure the skills presented at each level.

The program was developed by examining objectives across two widely used fire safety curricula. Objectives found in the National Fire Protection Association's LNTB Curriculum are geared to children in grades K - 8. The LNTB Program is a nationally-recognized program with well-defined objectives and support material. The program is based on the spiral approach to learning: utilizing the same 25 behavioral objectives throughout Grades K - 8 with an increase in sophistication of knowledge and skills at each level.

Fire Safety... for the Best of Your Life Curriculum, developed by the Foundation for Fire Safety, is a curriculum based on 27 key fire/arson behaviors. This curriculum incorporates an interdisciplinary approach to teaching fire safety within the standard courses taught in secondary school (Grades 9 - 12). After reviewing all objectives found in these curricula, two levels of fire safety concepts were selected to represent those key aspects of fire safety behavior most crucial to survival.

Content and General Features

The survey is organized on two levels that collectively assess the range of knowledge found in Grade 6 - Adult. The primary purpose of this survey is to provide the examiner or project coordinator with data to be used in a formative evaluation of fire safety behaviors. More specifically, evaluating the data in a formative manner enables the examiner to identify specific strengths and weaknesses in pupil mastery of important concepts and behaviors. The formative evaluation process also aids the examiner in identifying possible additional remediation required in a fire prevention program already in use. Hence, teaching and/or retraining can be conducted in a much more effective and efficient manner as the teaching process is streamlined to meet the specific needs of the student(s).

Introduction

FIRECARE

The other target population that we have zeroed in on is the Senior Citizen population which, incidentally, now exceeds the school age population in the County.

We have developed a comprehensive program entitled Fire Care and I would like to take the opportunity at the conclusion of my time to show a short portion of this program.

Fire prevention is a goal we should all share. Each year, over $6 billion is lost to fire. Each year, fire claims some 6,000 lives. Among the causes of accidental death, only motor vehicles and falls cause more fatalities than do fires. For no age group is this threat more serious than for our Nation's Senior Citizens. Seniors, a growing population segment, are disproportionately susceptible to fire. That is why this program has been prepared.

The program has its roots in long-established efforts on the part of the fire service to educate and protect Senior Citizens. To be done completely, the job needs the help of instructors outside this group as well. Background information has been provided on each of the topics covered, therefore, to assist instructors who are not from the fire service.

The program has been prepared with these things in mind:

. the natural biological and emotional changes that accompany the aging process;

. the varying degree of diminished physical abilities of the elderly.

Each FIRECARE Kit includes detailed suggestions to effectively promote the program locally, a guide for conducting workshops for Senior Citizens, a recommended workshop schedule, background information and a list of workshop activities for each unit, and three, 20-minute slide presentations with audiotapes.

The program has been organized into three units, each addressing high priority areas of fire safety. The units can stand alone or be scheduled as a series:

Unit I: Survival Skills
Burns
Help Me!
Exit Drills in the Home (EDITH)

Unit II: Smoke Detectors
EDITH
Kitchen Fire Safety
Careless Smoking

Unit III: Alternative Heat Sources
Mobile Homes
Recreation & Vacation
EDITH

This Program has been prepared by Fire Service professionals, reviewed by a Senior Citizen Advisory Panel, and undergone extensive field testing. It is a valuable tool.

FIRECARE was developed by the Public Fire Safety Education Division of the County of Nassau, New York, Fire Service Academy, and by the Pennsylvania Office of Fire Safety Services. The development, field test, and distribution of FIRECARE are supported by the Fire Prevention Program of The Tobacco Institute, Washington, D.C.

FIRECARE will be presented to the 200,000 plus Senior Citizens throughout the County by using participants from the Retired Senior Volunteer Program (RSVP) as well as our own Instructors.

It is our goal to conduct at least two FIRECARE Programs in every Senior Citizen Center over the next 15 months. The packages will then be retained by the Senior Citizen Centers so that they can be utilized on a regular basis.

We have been fortunate in Nassau County to have been supported both financially and technically in the development of FIRECARE and the evaluation survey by The Tobacco Institute Fire Prevention Programs Grant Award.

We feel that part of the Federal Government's role in the future should be to assist localities in leveraging more interaction with the private sector. The job of fire prevention education cannot be left solely to public sector agencies. Coordinated efforts between the public and private sector, we feel will maximize community interest and awareness.

Additional efforts of promoting residential sprinkler programs without diminishing the role of smoke detector systems will perhaps, in the long, be the most effective panacea for reducing fatalities/injuries in single family dwellings.

We are, however, interested in the short term as well. The new media, i.e. teleconferencing by the National Fire Academy and the availability of information on comparisons with international fire safety, have created a general awareness of public interest not seen in the past.

The Fire Service, through educational efforts and an increased awareness of the role in public education, gives us a golden opportunity to institutionalize public fire safety education at this time.

This effort requires the combined imagination, financial support and brain power of as many public and private sponsoring agencies and individuals who are willing to cooperate.

Mr. WALGREN. Thank you very much, Mr. Granito. We appreciate that explanation of what you are trying to do in Nassau County. I know Ray McGrath would want to be here to both introduce you and also to hear your testimony, and I'm sorry he was delayed by another commitment but I'm sure you will see him sometime soon.

Let's turn, then, to Mr. McGary from Takoma Park. Welcome to the committee.

STATEMENT OF ROGER A. McGARY, FIRE CHIEF, TAKOMA PARK, MD, VOLUNTEER FIRE DEPARTMENT

Mr. McGARY. Thank you, Mr. Chairman and members of the committee. My name is Roger A. McGary. I am career fire chief of the Takoma Park, MD Volunteer Fire Department, and serve as president of the 6,000-member International Society of Fire Service Instructors. I am here to day to speak to you as a fire chief practicing at the grassroots level.

Takoma Park is a unique community. Two-thirds of the city lies within Montgomery County and its fire service is funded through that jurisdiction. We serve some 20,000 residents in our fire due response area. Add to that a unique fire and rescue service for the county, one that consists of 18 independent fire and rescue departments combined with the county's Department of Fire and Rescue Services, delivering fire and rescue services to more than 600,000 residents.

A major event occurred last week in Montgomery County, one in which our department played a role. We completed on October 2, 1985 1 full year without a fire fatality—mind you, 12 months without a fire death in a county of over 600,000 people. We believe that is newsworthy. When you look at the adjacent metropolitan Washington, DC area, we are the only jurisdiction within the Council of Governments participants that has made such an accomplishment.

We must also look at several other statistics from Montgomery County. From 1970 to October 1984, the last fire death, 150 of our citizens lost their lives in fires. Of those, 91 died in single-family homes, 33 in multifamily dwellings, and 5 in mobile homes—a total of 129 dying in dwelling places. Is there any doubt in your mind as to where the fire problem exists—the place where we live.

Another statistic of note: Since the advent of the mandatory smoke detector law in Maryland, fire deaths in Montgomery County have decreased by 50 percent.

Yes, the MGM Grand, Beverly Hills Supper Club, Ringling Brothers circus tent, Coconut Grove, and Iroquois Theater fires of years gone by made greater headlines, but they represent only a fraction of those who have died in the place we take most for granted—our home.

You might be asking at this point how Montgomery County and its 18 independent fire and rescue corporations made such an impact. What programs do we have that have given us such an enviable record?

Many years ago as a chemical industry employee I subscribed to a philosophy that was touted as a method of ensuring safety to the employees we protected. It consisted of three key words, three words which I believe still apply and can be reflected in Montgomery County's success story. They are engineering, education, and enforcement. Let me review with you just some of the initiatives undertaken in our county that I believe have been key factors.

First, engineering: Montgomery County adopted a strong building and fire safety code a number of years ago. It provided for construction of single and multifamily residences with built-in protection, such as rated walls, doors, closure devices, and the like, surrounding the national model code requirements. Montgomery County's code is unique in that it is a retroactive code. When improvements are made to the code, the property owner, through due process, must also make changes. That code has been updated as required and we reinforced by the smoke detector law noted a minute ago. Our code now requires hard wiring of such devices at all levels within a residence, ensuring a greater degree of alarm.

We can't leave the area of engineering without discussing for a moment the aspect of the new technology of residential sprinklers. With the advent of the quick-response sprinkler head and alternatives to piping, we are finding success stories now appearing. Most all of you are familiar with the life saves that have occurred in Cobb County, GA. They only prove that a solution to the fire death and injury situation, from an engineering standpoint, is here and ready for use.

Montgomery County is taking a step forward in this line. On October 22 a public hearing will be held on a bill that will legislate quick-response residential sprinklers in all new residential properties. It is the first county in the State to take this approach. In the meantime, group homes and several private residences have been protected. You will hear about one of these in a few minutes.

The second point—education: If a program is to meet with success, then we must educate the benefactors. Montgomery County and its fire services have taken a lead in this activity and we are recognized on a national level for our endeavors. From the county's Department of Fire and Rescue Services' Fire Prevention Division to the local fire departments, a coordinated and supported effort has enabled us to reach a vast majority of citizens with a variety of programs. Let me tell you just about a few, in particular those that have been of great help in Takoma Park.

Home inspections: Each spring the department, through its city newsletter, promotes and does fire safety inspections as requested.

Smoke detector survey: A recent survey conducted as a graduate doctorate program at Johns Hopkins University noted a serious problem with battery-operated detectors, those primarily found in older residences. This related to dead or missing batteries and/or nonfunctioning detectors. With Takoma Park consisting of a majority of older homes, built before smoke detectors were even known, the majority of these detectors in our community are of the single-station battery type.

Armed with this knowledge, we have begun a community-wide, door-to-door inspection program. Such a program is voluntary on the part of the resident. Our personnel will deliver to each residence in a given area early in a week, a flyer telling of the potential problem and our return visit date. We then make that return and, if invited in, discuss early-warning devices, check the installation location, and make a functional test with a test gas. We have found almost half of the detectors inspected to be nonfunctioning. Where batteries are dead or missing, we are giving to the resident—including installation and testing—a new battery.

Takoma Park has a large population of non-English speaking citizens. How might we reach them with an appropriate fire prevention message? Our public education specialist developed a flyer in four languages to help reach these groups. A copy of that is attached to this testimony. It was delivered by our personnel as an inservice activity.

School programs have been a major effort of many fire departments, and we in Takoma Park and Montgomery County are no exception. For the past 4 years the well-known National Fire Protection Association "Learn Not To Burn" program has been presented to the fourth grades in our public schools. This effort has seen 6,000 fourth graders contacted each school year. This year the effort is being expanded to reach not only the public schools but the private schools. It is projected that 12,000 students will receive such training by next June.

Open houses at fire stations continue to be a mainstay. Conducted during Fire Prevention Week or at other times for school tours, the "Learn Not To Burn" program offering noted above is reinforced through activities in the tour.

Block parties in a community are popular. Takoma Park is no different. We attempt to meet the public at such affairs. This past Sunday Sligo Creek Parkway, which bisects Takoma Park, was closed to vehicle traffic and various programs were put on. We were there. Takoma Park's "Old Town Days," its "Folk Festival" and sister fire presentations find the fire department there, promoting fire safety education.

Sprinklers, as noted today, may well make hearings such as this obsolete. How did we get the message out? In Takoma Park, we have brought the FEMA trailers to demonstrate the potential. Citizens and politicians have had the opportunity to sit in a trailer and experience the effect of fire and to see the results of a quick-response sprinkler. It makes a lasting impression.

Takoma Park Volunteer Fire Department has as its public education specialist an individual with many ideas. He has developed his own cartoon character that has appeared in the city's monthly newsletter and several of the county newspapers. That character provides a fire-safe message. With the advent of cable TV and our own citywide public access channel, we are preparing to present material in that manner. Various merchants in the community have supported our efforts by permitting distribution of fire prevention literature and displaying fire prevention exhibits.

We must further understand that two areas of our population are extremely vulnerable. We have heard today that juveniles and elderly are susceptible. In the county, two efforts in this area are noteworthy. First, a pilot program involving the installation of 100 life-safety alert systems has been implemented. These devices provide for automatic transmission of fire and health alarms for the elderly and handicapped.

Second, "Operation Extinguish," juvenile firesetter intervention and prevention: It is a cooperative effort with the county department of fire and rescue services, the Montgomery County Police Department, and the Montgomery County Police Boys and Girls Club, where juvenile firesetters are provided with psychological counseling. Montgomery County provides for adult arrest of any arsonist 7 years of age or older. The mandatory participation in this program becomes much easier.

The third key is that of enforcement. Single-family residences see that occur only at the time of occupancy. However, multifamily facilities, dependent upon the type, find inspections on an annual basis occurring. For the most part these are conducted by inservice fire department personnel, backed up by the county fire marshal's office. Time is permitted for corrective action unless a major life safety problem exists, and appropriate reinspections are done.

If we in the fire and rescue services of this Nation are going to succeed in accomplishing the three E's—engineering, education, and enforcement—the need then to reach the community becomes paramount. Emergency response can help reduce the fire death and injury rate by a commitment—a commitment to become involved within their respective communities. There needs to be within the emergency services an attitude change. This change must start at the top and work its way down to the firefighter.

We are seeing that change take place in this decade, and even greater strides will be made in the years ahead. In some instances these changes are being advocated through the fire service membership organizations such as the one I belong to, the International Society of Fire Service Instructors, in writings, conferences, and seminars. The development of national standards and training programs offered through the National Fire Academy are key considerations for change. The NFA programs alone have made a tremendous impact in the public fire safety education activity.

Finally, there is a need to change the attitude of the citizen. We in the emergency services can help make that change by implementing programs at every level within the local community. Our role as emergency response personnel, in my opinion, is not decreasing, but increasing. As the response to incidents declines, the response to the engineering, education, and enforcement effort must increase. That increase of activity will help influence and change the attitude of the citizen, with the result being savings of life and property and prevention of burn injury. After all, isn't that what protection and prevention by the fire services is all about?

Thank you.

[The prepared statement of Mr. McGary follows:]

Testimony of Roger A. McGary

U.S.House of Representatives
Committee on Science & Technology
Oct.9, 1985

My name is Roger A. McGary. I am career fire chief of the Takoma Park, MD Volunteer Fire Department and serve as president of the 6000 member International Society of Fire Service Instructors.

Takoma Park is a unique community. Two/thirds of the city lies within Montgomery County and its fire service is funded through that jurisdiction. We serve some 20,000 residents in our fire due response area. Add to that a unique fire and rescue service for the county-- one that consists of 18 independent fire and rescue departments combined with the county's Dept. of Fire and Rescue Services, delivery fire and rescue services to the more than 600,000 residents.

A major event occurred in Montgomery County..one in which our department played a role. We completed, on Oct. 2, 1985, one full year without a fire fatality. Mind you...12 months without a fire death in a county of over 600,000. We believe that's newsworthy. When you look at the adjacent metropolitan Washington DC area we are the only jurisdiction within the Council of Governments participants that has made such an accomplishment.

We must also look at several other statistics from Montgomery County. From 1970 to October 1984 (the last fire death), 150 of our citizens lost their lives in fires. Of those 60.6% (or 91 people) died in single family homes, 22% (or 33) in multi family dwellings and 3% (or 5) in mobile homes--a total of 85.6% or 129 dieing in dwelling places. Is there any doubt in your mind as to where the fire problem exists, i.e., the place where we live?

Another statistic of note..since the advent of the mandatory smoke detector law in Maryland fire deaths in Montgomery County have decreased by 50%.

Yes, the MGM Grand, Beverly Hills Supper Club, Ringling Brothers Circus Tent, Coconut Grove and Irioquis theatre fires of years gone by made greater headlines, but they represent only a fraction of those who have died in the place most taken for granted...our homes.

You might be asking at this point how Montgomery County and its 18 independent fire and rescue corporations made such an impact? What programs do we have that have given us such an enviable record?

Many years ago, as a chemical industry employee, I subscribed to a philosophy that was touted as a method of ensuring safety to the employees we protected. It consisted of three key words, three words which I believe still apply and can be reflected in Montgomery County's success story--they are Engineering, Education and Enforcement.

Let me review with you some of the initatives undertaken in our county that I believe have been key factors.

First--the Engineering portion. Montgomery County adopted a strong building and fire safety code a number of years ago. It provided for construction of single and multi family residences with built in protection such as rated walls, doors, closure devices, etc. surrounding the national model code requirements.

Montgomery County's code is unique in that it is a retroactive code. When improvements are made to the code the property owner, through due process, must also make changes.

That code has been updated as required and was reinforced by the Smoke Detector law noted a minute ago. Our code now requires hard wiring of such devices at all levels within a residence, ensuring a greater degree of alarm.

We can't leave the area of engineering without discussing for a moment the aspect of the new technology of residential sprinklers. With the advent of the quick response sprinkler head and alterntives to piping we are finding success stories now appearing. Most all of you are familiar with the life saves that have occurred in Cobb County, GA. They only prove that a solution to the fire death and injury situation, from an engineering standpoint, is here and ready for use.

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In the mean time group homes and several private residences have been so protected. You will hear about one of these in a few minutes.

Second--the Education phase. If a program is to meet with success then we must educate the benefactors. Montgomery County and its fire services have taken a lead in this activity and we are recognized on a national level for our endeavors.

From the County's Dept. of Fire and Rescue Services Fire Prevention Division to the local fire departments a coordinated and supportative effort has enabled us to reach a vast majority of citizens with a variety of programs. Let me tell you about just a few of these..in particular those that have been of great help in Takoma Park.

--Home Inspections---each Spring the department, through the City Newsletter, promotes and does home fire-safety inspections as requested.

--Smoke Detector Survey---A recent survey conducted as a graduate doctorate program at John Hopkins University noted a serious problem with battery operated detectors, those primarly found in older residences. This related to dead or missing batteries and/or a non-functioning detector.

With Takoma Park consisting of a majority of older homes, built before smoke detectors were even known, the majority of these detectors in our community are of the single station battery type.

Armed with this knowledge we have begun a community wide, door to door inspection program. Such a program is voluntary on the part of the resident. Our personnel will deliver to each residence in a given area, early in a week, a flyer telling of the potential problem and our return visit date. We then make that return and if invited in discuss early warning devices, check the installation location and make a functional test with a test gas.

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--School programs have been a major effort of many fire departments and we in Takoma Park and Montomery County are no exception. For the past four years the well known National Fire Protection Assn. Learn Not to Burn program has been presented to the fourth grades in our public schools. This effort has seen 6,000 fourth graders contacted each school year. This year the effort is being expanded to reach not only the public school, but the private schools. It is projected that 12,000 students will receive such training by next June.

--Open houses, at fire stations, continue to be a mainstay. Conducted during fire prevention week and for school tours the Learn Not be Burn offering noted above is reinforced.

--Block parties are popular in every community. Takoma Park is no different. We attempt to meet the public at such affairs. This past Sunday Sligo Creek Parkway, which disects Takoma Park, was closed to vehicle traffic and various programs were put on..we were there.

--Takoma Park's Old Town days, Folk Festival and Sister Fire presentations find the fire department there..promoting fire safety education.

--Sprinklers, as noted above, may well make hearing such as this obsolete. How do we get the message out? In Takoma Park we've brought in a Sprinkler Trailer to demonstrate the potential. Citizens and politicans have had the opportunity to set in a trailer and experience the effect of fire and see the results of a quick response sprinkler. It makes a lasting impression!

--Takoma Park Volunteer Fire Dept. has as its public education specialist an individual with many ideas. He has developed his own cartoon character that has appeared in the City's Monthly newsletter and several of the county newspapers. That character provides a fire safe message.

--Various merchants in the community have supported our efforts by permitting distribution of fire prevention literature and displaying fire prevention exhibits.

-- We must further understand that two areas of our population are extremenly vulernable...they are the juvenile and elderly. In the county two efforts in this area are noteworthy.

a) A pilot program involving the installation of 100 Life Safety Alart Systems has been implemented. These devices provided for automatic transmission of fire and health alarms for the elderly and handicapped.

b) Operation Extinquish: Juvenile Fire Setter Intervention and Prevention is the second activity. In a cooperative effort with the county Dept. of Fire & Rescue Service, the Montgomery County Police Dept. and the Montgomery County Police Boys and Girls Club juvenile fire setters are provided with psychological counseling. Montgomery County provides for adult arrest of any arsonsist 7 years of age or older. The mandatory participation in this program becomes much easier.

The third key item is that of Enforcement. Single family residences see this occur only at the time of occupancy. However multi family facilities, dependent on type, find inspections on an annual basis occuring. For the most part these are conducted by in-service fire department personnel backed up by the County Fire Marshall's office. Time is permitted for corrective action unless a major life safety problem exists and appropriate re-inspections are done.

If we in the fire and rescue services of this nation are going to succeed in accomplishing the 3 Es (Engineering, Education and Enforcement), the need then to reach the community becomes paramount. Emergency response organizations can help reduce the fire death and injury rate by a commitment--a commitment to become involved within their respective communities.

There needs to be, within the emergency services, an attitude change. This change must start at the top and work its way down to the firefighter. We are seeing that change take place in this decade and even greater strides will be made in the years ahead. In some instances these changes are being advocated through our membership organizations, such as mine--the International Society of Fire Service Instructors--in writing, conferences and seminars. The development of national standards and training programs offerred through the National Fire Academy are key considerations for change. The NFA alone has made a tremenedous impact in the Public Fire Safety Education effort.

Finally there's a need to change the attitude of the citizen. We in the emergency services can help make that change by implementing programs at every level with the local community. Our role, as emergency response personnel, in my opinion, is not decreasing, but increasing. As the response to incidents declines, the response to the Engineering, Education and Enforcement efforts must increase.

That increase of activity will help influence and change the attitude of the citizen with the result being savings of life and property and prevention of burn injury. After all, isn't that what the fire service is all about?

-end-

EN UN MOMENTO DE EMERGENCIA LLAME AL

911

MANTENGA LA CALMA.

Hable despacio y claro, y dé la siguiente información:

DIRECCIÓN (dirección exacta del lugar de la emergencia)

MOTIVO (diga de que se trata la emergencia)

TELEFONO (diga de donde usted está llamando)

SU NOMBRE

ESPERE A QUE LE HAGAN OTRAS PREGUNTAS

NOTA ESPECIAL: En caso de incendio, todos desalojen el apartamento o la casa y permanezcan a no menos de 50 pies del edificio. Llame a los bomberos al teléfono más cercano ya sea público o privado.

ADEMÁS: Si usted vive en un edificio de apartamentos muy alto, de los llamados "high rise", hale la alarma de incendios localizada en cada piso antes de abandonar el edificio.

SALVE SU VIDA Y LA DE OTROS

DEPARTAMENTO DE BOMBEROS VOLUNTARIOS DE
TAKOMA PARK, INCORPORADO

159

TRONG TRƯỜNG HỢP KHẨN CẤP XIN

GỌI 911.

ĐIỀU QUAN TRỌNG XIN BÌNH TĨNH

(nói rõ và chậm)

SẴN SÀNG ĐỂ CHO NHỮNG TIN TỨC NHƯ SAU:

ĐỊA CHỈ (nơi xẩy ra hỏa hoạn hoặc tai nạn)

TAI NẠN (xẩy ra là gì? tai nạn hay hỏa hoạn hay chuyện gì đã xẩy ra)

ĐIỆN THOẠI nơi bạn đang gọi đến

TÊN CỦA BẠN

HÃY CHỜ ĐỂ TRẢ LỜI NHỮNG CÂU HỎI

GHI NHỚ:
Nếu trong trường hợp hỏa hoạn hãy đem mọi người ra khỏi nhà và hãy tránh xa hỏa hoạn.
Gọi cho hàng xóm của mình hay.

NẾU BẠN MUỐN BIẾT THÊM CHI TIẾT VỀ,
PHÒNG NGỪA HỎA HOẠN, XIN LIÊN LẠC VỚI

TAKOMA PARK VOLUNTEER FIRE DEPARTMENT, INC.

ព្រឹត្តិការណ៍ នៃ អាពាធអាសន្ន
ទូរស័ព្ទលេខ. 911
សារៈសំខាន់ជាងគេ នៃការស្ងប់ស្ងាត់
(និយាយយឺតៗ និង ច្បាស់លាស់)
ត្រៀមផ្ដល់ជូន ពត៌មាន ខាងក្រោម ៖

អាសយដ្ឋាន	(ទីកន្លែង នៃអាពាធអាសន្ន)
ធម្មជាតិហេតុ	(រឿង ដែលផ្ដល់ឲ្យមានអាពាធអាសន្ន)
ទូរស័ព្ទលេខ	(ទីកន្លែង ដែលទូរស័ព្ទ)

ឈ្មោះ លោក-អ្នក.
រង់ចាំឆ្លើយនូវសំនួរផ្សេងៗទៀត. ។

ការកត់សំគាល់ពិសេស ៖

ដំណឹងៈ ព្រឹត្តិការណ៍នៃ អគ្គិភ័យ. ។
នាំគ្នាចេញពីផ្ទះ ហើយនៅក្រៅ!
ទូរស័ព្ទ ពីផ្ទះ អ្នកជិតខាង. ។

ការកត់សំគាល់ ៖

បើលោកអ្នករស់នៅលើអគារខ្ពស់ៗ ឬ ល្វែងកាត់ជ័យ លើលក្ខណៈ ខាងលើនេះ ដោយ ទាញ សញ្ញា អគ្គិភ័យ នៃ ការរ៉ោយ ពេល លោកអ្នក ចាកចេញ. ។ ។

" ដំណឹងៈ ក្នុងប្រយោជន៍ នៃការការពារ អគ្គិភ័យ "
TAKOMA PARK VOLUNTEER FIRE DEPARTMENT, INC.

IN AN EVENT OF AN EMERGENCY

DIAL 911

MOST IMPORTANT BE CALM!

(speak slowly and plainly)

Be ready to give the following information:

ADDRESS	(exact location of the emergency)
NATURE	(what is the emergency)
PHONE NUMBER	(from where you are calling)
YOUR NAME	

WAIT FOR ANY OTHER QUESTIONS

SPECIAL NOTE: In the event it is a fire get everyone out and stay out! Call from neighbor's house.

NOTE: If you live in a high rise apartment building, you should in addition to the above, pull a fire alarm station as you leave.

"IN THE INTEREST OF FIRE SAFETY"

TAKOMA PARK VOLUNTEER FIRE DEPARTMENT, INC.

Mr. **Walgren**. Thank you very much, Mr. McGary.

Well, let's then turn to Mr. Marschalk, and we would love to hear your experiences.

Mr. **McGary**. Mr. Marschalk is going to use his tape recorder to give you some short remarks.

Mr. **Walgren**. Great.

STATEMENT OF HENRY E. MARSCHALK, TAKOMA PARK, MD

Mr. **Marschalk**. I would love to have put together something on paper that I could read as effectively as the document you just heard read by the chief, who sits to my left, a gentleman I have found is one of the very fine people in this business, and we are extremely proud of him. So, in view of the fact that it was not practical for me to put down something on paper and to read it, I resorted to the tape process. This is what I put out, which I have timed at about 8 minutes, according to Carrye Brown's request.

Mr. **Walgren**. Fine.

Mr. **Marschalk**. Thank you, Mr. Chairman. I am Henry Ernest Marschalk of Takoma Park, MD.

It may be of interest to you and to the members of your committee that I was privileged 12 years ago to offer testimony before a committee constituted somewhat similar to yours, and having as its objective the creation of legislation hopefully designed to minimize the then scandalously dreadful fire problem in these United States. Although I knew that sprinklers of a sort had been invented more than 100 years ago, they were in somewhat primitive form, and even with developing refinements there was little if any thought given to their possible use in the average residence.

In my testimony in 1973 I expressed the hope that research might evolve a fire-extinguishing gas, harmless to human beings. Such a gas has yet to be discovered or invented. However, from that earlier committee's efforts and with the assistance of knowledgeable people in the fire community, in 1974 there was established the National Fire Prevention and Control Administration and, 2 years later, the U.S. Fire Administration. In the latter organization was a gentleman named Harry Shaw, who persuaded both the laboratories and segments of industry to help develop less expensive and more efficient smoke detectors.

The acquisition of these devices certainly must account for an appreciable reduction in fire casualties throughout this Nation but, unfortunately, there have been many instances of failure to maintain smoke detectors, most of which require periodic replacement of batteries. A properly working smoke detector should give warning of a fire, and in some instances there may be an opportunity to quickly call a fire department.

In communities blessed with good fire service, the average response time from receipt of an alarm to arrival of equipment is 4 minutes, if streets are dry and there are no complicating traffic situations. Obviously the response time will be longer under conditions of heavy snow or ice. Irrespective of those factors is the question of ready availability of water from a fire hydrant, pond, lake, or swimming pool. It should be obvious that, even under the very best time conditions, a fire in a residence or apartment can be a very costly and distressing event.

One of this Nation's most respected fire chiefs recently made the following astute comment: "Firefighting as we know it is archaic, expensive, and dangerous." He is Chief Dave Hilton of Cobb County, GA. Under his general guidance, Cobb County now has thousands of residential units that now are equipped with the quick-response sprinklers. Because of that program, there have been four completely separate and different life saves, each save being quickly accomplished by those remarkable fast-acting sprinklers which work in seconds.

Now, Mr. Chairman and members of the committee, my residence in Takoma Park is 42 years old. About 2 months ago I authorized two men who are very skilled in the work of installing quick-response sprinklers, at the suggestion of the director of the Maryland Fire and Rescue Institute, where these men were graduated after displaying top skills in fire protection and later displaying those skills by working for an organization in Virginia which was building many new structures, all of which were being equipped with the new quick-response sprinklers. It is much easier to install the sprinklers as a building is being constructed, but on a retrofit job such as on my house the work is more time-consuming and must be carried forth with accuracy and unobtrusive neatness. This has been accomplished and it has been approved by high-level specialists who have been praiseworthy of the overall excellence of the work.

In view of the fire disasters which have occurred in nursing homes in various parts of this Nation and in homes for the elderly, the bedridden, and those who must use wheelchairs, there should be a resurgence of financial support to provide such places with the protection of quick-response sprinklers. The skilled individuals who are making installations of quick-response sprinklers indicate that such installations should cost no more than 1 percent of a building under construction and no more than 2 percent for a building long since built. These costs obviously are very, very low. Furthermore, a properly installed sprinkler system should gain at least a 15-percent reduction in fire insurance.

For those of us who care about the public safety, particularly the growing problem posed by dangerous toxicity, throughout all fire history firefighters have had to contend with smoke. Most of this smoke was not excessively dangerous and many firefighters had a bravado attitude and often were nicknamed "smoke-eaters." But the picture has drastically changed in recent years because of the enormous amounts of plastic foam used for stuffing furniture and bedding and also the amount of furniture framed with plastic hardware. Even wastebaskets today commonly are made of plastics. When these plastics burn they give off toxic fumes, most of which are considered very dangerous.

But at long last we are beginning to recognize that we have the solution to this terrible problem within our grasp. In this case it's through the development of the quick response residential sprinkler, again through the urging, persistence and overall guidance of Harry Shaw. We know now, on the basis of extensive testing and demonstration fires, plus the several cases of lives saved in Cobb

County, GA, that at long last we have the opportunity to dramatically reduce the fire losses in this Nation. Based on test after test, demonstration after demonstration, and actual fire cases, the quick-response sprinkler puts out the fire in seconds, and in so doing it eliminates the toxicity problem. Let us recognize at last that we do in fact have the answer, the answer to not only the toxicity problem but the answer to the fire problem itself.

That, I think, covers quite a bit in a relatively short time, Mr. Chairman. I could go on with background statements on actual experiences, one of which was one of the most terrible of the hospital fires in this Nation. It occurred in Effingham, IL, in 1949. That fire was one of those which was just made to burn. It was a hospital which was very poorly constructed. The fire insurance people had been there only about 2 weeks before. There was no objection to the situation they saw. They were glad to keep insuring the building. Well, it just so happened that there were 128 people in that building that night, including 11 newborn children. Eighty-nine lost their lives, including all of the newborn children.

Had they had a sprinkler system, there would have been no fire, because the fire originated in a laundry chute in the basement where undoubtedly some nurse, in pulling up the sheets and so forth the way they do, rolling them up, pushing them in the laundry chute, didn't notice there was a still-burning cigarette. Had there been a sprinkler, there would have been no fire and no loss of lives.

The answer today is the quick-response sprinklers, and we've got to realize this. We have the worst reputation of any industrialized nation in the world. On a scale of 1 to 10, we are at 10. Where are the European countries, England, France, Germany, et cetera? They are down around 5, 5½. Where is Switzerland? Down at 3. If you have been in Switzerland as I have, along with these other countries and all, you would recognize why Switzerland has so few fires. They have an extremely effective control over every citizen. It is mandatory to let in the fire inspector, and he does everything that is necessary to get a place as safe as is possible.

We may not have to do that sort of thing by mandating, but at least we can have the wisdom to push quick-response sprinklers because at long last that is the answer in this Nation. Thank you, Mr. Chairman.

Mr. **Walgren**. Thank you very much, Mr. Marschalk. We certainly appreciate that and hope that we can play a role in extending that message that you have brought to us.

Mr. Darrah?

STATEMENT OF RONALD DARRAH, PRESIDENT, NATIONAL FIRE INFORMATION COUNCIL

Mr. **Darrah**. Thank you, Mr. Chairman and committee members, for the opportunity to speak with you today on this very important topic of fire safety in our Nation. My name is Ronald Darrah, and I am a battalion chief with the San Diego City Fire Department. In addition, I am president of the National Fire Information Council. I am here to speak to you in that capacity today.

We have talked over the years about collecting data so we can get a handle on our fire problem, and we are an organization that is effecting that data collection. The members of NFIC—the National Fire Information Council—are 31 State members with two additional States coming into the system in the very near future, and also 22 major metropolitan areas in the United States, that participate by using the National Fire Incident Reporting System that is provided by the U.S. Fire Administration. All of the members of our organization are members of either State or local government agencies that are interested in fire prevention and fire protection. Much of their time that is donated to our organization is volunteer. We have a membership of 15 board members that give up several weekends a year to the dedication of keeping this organization on its feet and the data collection effort going forward.

The functions of NFIC are many. The most important is the coordination of data collection across the Nation. The data collection starts at the local level, where the fire captain goes out to a fire scene and he or she collects the data at that scene and takes it back to the station, and then sends it to the fire department headquarters, where that fire department's fire incident data is gathered and then sent to the State level. The State level agencies then take the data from the State, analyze that data to get a picture of the State problem, and then send that data to the national level, where we then can analyze and get a picture of the national fire problem. Many of the statistics that you have heard today have come from that very system.

In addition, our organization encourages and provides training in the data analysis of the information that is collected. We try to encourage our people to use that data for management of their local fire department and their State programs of fire prevention. We provide training and training materials for the operation of the National Fire Incident Reporting System, and we also provide that for people who want to come onto the system, the new States or metros. We encourage standardization in data collection and quality control, which we feel is critical to our national effort in data collection. We also supply, at no cost, technical assistance to anyone who is in the program or is thinking about getting in the program, on-site.

We do these functions in several ways. We have our board meetings to do planning and goal setting. We hold regional workshops for the membership, and we hold an annual conference where we intensify our training of the people in our organization. You saw a couple of PSA's today. Those were produced in conjunction with the National Fire Administration by the National Fire Information Council. We have another one planned for the first of the year that will address the very old and the very young dying in fires. In addition, this week we have distributed over 100,000 fire prevention posters and 150,000 bumper stickers for Fire Prevention Week, using our system.

NFIC works with many other organizations. It works hand-in-hand with the U.S. Fire Administration. Our efforts with the U.S. Fire Administration are to help the overall program management of the National Fire Incident Reporting System. In addition, we are now assisting the U.S. Fire Administration in the distribution and the training effort of the management applications project, which brings down to the local level a microcomputer application for data collection in fire incidents, in addition to other management phases such as fire prevention and medical statistical gathering. We also help the U.S. Fire Administration produce the National Fire Statistic Report. We are closely working with CPSC in their use of our data, and next month we will be meeting with some members of that organization to set up a system in which specific studies can be done using our membership as a resource for their data collection effort, besides the national data tapes. We are working with as many organizations as we can to get the data out so that organizations can get the education back to the public.

In closing, I would like to say that we have effected a working relationship from the local level to the State level to the Federal Government that impacts very minimally from the Federal Government, and we are now providing the Nation with a major service, and we intend to keep that up. Thank you.

Mr. **Walgren**. Thank you very much, Mr. Darrah.

I turn to Mr. Brown.

Mr. **Brown**. Mr. Chairman, in light of the time I would like to just ask one question of Mr. Henry, if I might.

I have had a longstanding interest in the use of teleconferencing for educational and training uses. Could you give me a very quick description of how you have used this technology and what your evaluation of the process is?

Mr. **Henry**. Well, at this particular time I think it's excellent. The way we use it in Pennsylvania is, we try to establish geographic locations across Pennsylvania that have the capability to bring these teleconferences in, and we send notification out. Depending on the issue that is going to be teleconferenced, we then bring in the kind of individual that we feel that can take that kind of information and get the greatest potential out of it by disseminating it out into their areas, and then we as the State fire focal point, we coordinated this and make these conferences available to the majority of people within the Commonwealth.

Mr. **Brown**. Is there two-way communication here?

Mr. **Henry**. Yes, sir; you can call in, yes, sir, by phone.

Mr. **Brown**. By phone?

Mr. **Henry**. Yes, sir.

Mr. **Brown**. All right. Thank you very much.

Mr. **Walgren**. Mr. Boehlert.

Mr. **Boehlert**. Thank you, Mr. Chairman.

At the outset I want to say that I am deeply impressed by the high degree of professionalism and commitment that is evidenced by all of our witnesses.

Two areas, one for Mr. Henry and Mr. Granito: My experience with code enforcement has been that it is weak at best, even where you have the best codes, the strongest codes. Could you address code enforcement in Pennsylvania and then you in Nassau County, if you will, because that is a very serious problem.

Mr. **Henry**. Well, in Pennsylvania we have a statewide code and we in terms like to call it a life safety code, but it is both: It is a life safety and building code consolidated into one. It is a minimum code. We realize there are a lot of areas in the Commonwealth that are hard-pressed financially and they can't meet the most stringent building requirements, so the fire regulations which is a minimum life safety code provides a reasonable degree of safety, that is practicable, that is achievable, so to speak, but there isn't anything in that code that would prohibit a municipality from adopting a more stringent code, like the BOCA code or one of the more model building codes. In conjunction, we use our statewide life safety code with each individual municipality and work it that way.

Does that answer your question?

Mr. **BOEHLERT**. Mr. Granito?

Mr. **GRANITO**. In New York State it's somewhat different. Although we do have a uniform fire code in New York State that is promulgated by State agencies, it is locally enforced. I see the problem in New York State as being who locally is the enforcement authority.

In Nassau County we are very fortunate. We have a full-time fire marshall and a full-time fire marshall staff. It was constituted in 1938, so local enforcement of a local statute as well as a State statute is somewhat easier. I know in upstate counties it is more difficult because there is not a focal point or a county fire marshall that would uniformly enforce a code across town boundaries within a county. That I see as the real problem.

Mr. **BOEHLERT**. Because, as Chief McGary pointed out, enforcement is one of his three E's.

Mr. **GRANITO**. He is absolutely right.

Mr. **BOEHLERT**. I just have a feeling that a very high percentage of fires, upon investigation it is revealed that code violations are probably a key factor in the fire.

Chief McGary, if you start getting mail from upstate New York, you will know it is because I was so impressed with your testimony that I have made a note. I am going to send that testimony to all of my mayors and suggest that they look it over and maybe get back to you. Would you mind sharing with us what your Takoma Park budget is for your operation?

Mr. **MCGARY**. The fire department is budgeted at $1.3 million, and that includes 25 career people, an operating group of about 40 volunteers, and that includes salary and wage, operating expenses, and capital items.

Mr. **BOEHLERT**. Twenty-five professionals and how many volunteers?

Mr. **MCGARY**. Approximately 40.

Mr. **BOEHLERT**. Thank you very much. Thank all of you for your excellent testimony.

Mr. **WALGREN**. Are we going to have a flood of detector failures in the near future? You found, Mr. McGary, one in two not working. Are we at the end of a life cycle of a whole generation of detectors there that are going to be a major failure now?

Mr. **MCGARY**. I believe the disaster we have brewing and the smoke detector problem is really the single-station battery operated detector. That's the ones we are finding the major problems with. Some of the early generation detectors simply won't function. For whatever reason, they won't function, and I can't specify why. We simply recommend that they be replaced, and citizens do that.

The concern we have is the failure to properly maintain. I think a number of people have addressed that issue today and it is a critical one. I can't tell you the number of detectors we find that, one, the batteries are removed because they were put in the wrong place; the batteries are dead, and they start beeping, and the people take them out and never go anywhere to replace them. It scares me.

When we first started doing our survey program, people came back and said, "Hey, Chief, we've got *x* detectors today that don't work." I am suddenly saying, "We have been in a property without a functioning detector and left it that way," so I immediately authorized purchase of batteries, to go back out and hit those properties, to get them back working again, and every one we do now. But I think yes, the single-station battery operated detector, if we are any indicator of what is out there in the United States today, we are in sad trouble, and that does not include the hard-wired. The hard-wired to me are a much safer item from the standpoint of maintenance.

Mr. WALGREN. Yes. In Mr. Henry's testimony it indicates that in Pennsylvania we have had $200,000 of Federal funds over 8 years or thereabouts, mostly into public education and communication efforts. That's not very much money, something in the range of $20,000 a year for a State the size of Pennsylvania, and I gather the rest of you have experiences somewhat the same. Is there any question in your mind that substantially greater moneys than $20,000 a year for the State of Pennsylvania would be lifesaving resources at this point in your own circumstances?

Mr. HENRY. Again, the only—excuse me. Are you asking would $20,000 provide any kind of a benefit in Pennsylvania in reducing the fire problem? Is that the question?

Mr. WALGREN. Well, as I understood your situation, our situation, we have received $200,000 over 8 years——

Mr. HENRY. Right.

Mr. WALGREN [continuing]. In relatively small amounts—$30,000, $17,000, $10,000. Everett Dirksen would not identify that as "real money," and the question is, if that's all we are providing from the Federal level, even recognizing the massive efforts that are made on the State level, recognizing those, what is your advice for the Federal Government in terms of the level of resources that we should be providing to these kinds of efforts, without reinventing the wheel and wishing there were more effective ways? You can, I'm sure, sense how effective and who you are reaching with these efforts. Is the amount of money you are now receiving from the Federal level significant in terms of the overall problem?

Mr. HENRY. Absolutely not. Absolutely not, but in Pennsylvania we are very unique in the fact that we have the largest volunteer fire program in the Nation. We have 3,000 volunteer companies. We have a membership of 300,000 strong. The money was only a token but, in addition to the money, it was the technical assistance that was provided by our Federal fire focal point that created such a delivery system and put together such a diversification of talent, and then they provided a great deal of technical assistance out into the State that's not computed as far as what I'm saying.

That was dollars that Pennsylvania brought in but, for example, I identified our concerns about arson. The U.S. Fire Administration conducted over 17 major arson seminars, as far as how properly to put together an arson task force concept and work with it. The smoke detectors, they came in and conducted again 14 seminars in the State, and the technical assistance was just tremendous.

But to answer your question, Mr. Chairman, absolutely not. It was only a token, but it was all that was out there. That's what I said in closing. You know, things will come to those who wait, but only what is left by those who hustle. Somewhere along the line we have been left out since 1976. As far as I am concerned, the fire problem was never funded adequately, and I think we've got to get in there and do something about it and get our reasonable share. You know, when you look at the measurable benefits as a result of that token and put it in proper perspective, you know, I think we come up with a dollar figure that would certainly do justice to our efforts.

Mr. **Boehlert**. Will the chairman yield?

Mr. **Walgren**. I would be happy to yield.

Mr. **Boehlert**. At the risk of sounding too Republican, I happen to think that not all problems should be solved with a continuous flow of dollars from Washington. Would you say that, in view of the situation and our limited resources, that we are better advised to make sure we have continued adequate funding for the Center for Fire Research and the U.S. Fire Administration, and provide technical assistance to the States and local governments rather than a massive grant type of thing? In other words—and I guess I share the chairman's frustration—but do you see any massive deficiencies in your operation that could only be solved with more money from Washington? I guess that's the basic question.

Mr. **Henry**. Well, in all honesty, no. I don't think that's the answer, but your first question I think is a very broad question and one that is very difficult to respond to. In view of being taken out of context, I would be hesitant. I think you can research a problem to death; however, I think there is money needed in research. There are no two ways about it but I am concerned, too, about researching the same problems over and over and over again.

Mr. **Boehlert**. I understand it, but I guess my point is that I think we best serve your needs and make the most progress in solving our problem when we have the expertise at the Federal level as a result of research efforts that we can share—so, in other words, provide technical assistance to local governments rather than another grant program. I'm not a hard-line conservative who votes no on all spending programs by any stretch of the imagination. A check of my record will reveal just the contrary, but funding is always a big problem for us and I think we all have to acknowledge that.

Mr. **Walgren**. Well, I guess the point I'm trying to make is, there is a point where the money becomes de minimis, and I'm thinking of our own office budgets and how we consume $20,000. Each Congressman has an official office expense account of something in the range of—what is it these days?—$150,000 or something like that. That may not be overstating it, and I'm just sitting here thinking, now what is Pennsylvania going to do with $20,000?

I do think, although with all the weight given to the fact that we cannot provide a continual stream of money that occupies the field, at the same time it seems we are in danger of thinking we are doing something when we are really not because of the de minimis reach of the funding.

I wanted to ask Mr. Granito if he could develop a little bit of this idea of an opportunity at the present time to institutionalize public fire safety education. You indicate in your testimony—and you are not asking for an overreaching Federal role at all——

Mr. GRANITO. No.

Mr. WALGREN [continuing]. And in fact are looking back to the private sector tremendously, but you do sense this opportunity to create some kind of permanence to our commitment in education at this point. Would you develop that thought?

Mr. GRANITO. I would be glad to comment. First of all, the approach we have taken in Nassau County is to get as much private sector involvement in our programs as possible, because we have attempted to leverage the school districts by getting the community action groups involved in fire safety education, so when we plan a program such as "Firecare," we not only looked at the funding costs for that program, we really looked at the end use. Who is going to use the program, and if we spend $100,000 in program development, are we really going to get the maximum return on investment?

So what we essentially have done is gone to the communities and we have said to them, "If we had a fire education program that reached the senior citizen population, how would you most effectively use it? The approach that we have used is to get as many organizations in the private and public sector directly involved in the program as there develop, and this has worked out reasonably effectively.

The comment on funding of programs, I don't in our particular case see funding as the big problem. It isn't to say that we couldn't use more resources in our program area but, to give you an idea, our public education program in the county is funded at about $300,000 a year. All but about $20,000 is county funding. Now the real question is, what is going to happen with revenue sharing? Never mind the direct support to fire programs. My real concern is if the county comes back in our fiscal 1987 and 1988 budgets and say that, "Your program is going to be reduced because we don't have the revenue sharing option to put in fire programs." That, I think, is going to be a crucial issue that we need to address.

On the basis that it looks like a reduction in program funds in the next 2 or 3 years, we are going after the private sector. We have a number of corporations in Nassau County that are community-oriented, that are part of the community. They have big populations that work and live in the county. That's part of their responsibility. I see the institutionalizing as really the Federal and the local and State programs leveraging private industry to play a more proactive role in the ongoing programs. I think in the long run that's what will carry our programs as Federal funding decreases.

I am not optimistic. I don't see a great deal of Federal funding available in Nassau County in the future, certainly in the area of revenue sharing, and that's where a lot of our program base comes from.

Mr. **Walgren**. Then one other point with Mr. McGary: You don't yet have a mandatory residential sprinkler law. That is under discussion.

Mr. **McGary**. The first hearing is October 22.

Mr. **Walgren**. The first hearing. Any odds on——

Mr. **McGary**. We will probably not get the entire ball of wax, but we are looking very strongly, with great support from the county council and the building industry, for at least several multifamily-type buildings, in particular the townhouse issues, so we have a lot of support in that line. Getting it down to that individual family residence, we are going to have to work on that one.

Mr. **Walgren**. Would that be new construction that you are ultimately shooting at in this area?

Mr. **McGary**. New construction, yes, sir.

Mr. **Walgren**. Uh-huh, and you do require electric system wiring rather than battery source for your smoke alarms.

Mr. **McGary**. That is in all new construction.

Mr. **Walgren**. In all new construction? I see.

Well, on behalf of the subcommittee, we certainly appreciate what you have talked about today, and we hope that we can play a part in broadcasting the message. We appreciate your statements here today. They are going to be read by a lot of people and we hope that's a contribution, so thank you very much.

The last witnesses, which really should have been first, and I apologize to them for that: Ms. Evelyn Davis, the vice president of educational services for Children's Television Workshop, and John Gerard, who is the Washington representative of the National Fire Protection Association. Mr. Gerard is accompanied by Olivia Torres, who is 6 years old and had a fire in her family home in December a year ago, and was able to save a lot of members of her family because of what she learned.

I apologize that you weren't first. I am feeling that we should have gone forward that way, but this is the way it happened, so with our apologies, Ms. Davis, would you like to proceed?

STATEMENT OF MS. EVELYN PAYNE DAVIS, VICE PRESIDENT FOR EDUCATIONAL SERVICES, CHILDREN'S TELEVISION WORKSHOP

Ms. **Davis**. Thank you, Mr. Chairman and members of the committee. I am Evelyn Payne Davis, vice president of Children's Television Workshop. As you know, we are the producers of "Sesame Street," "Electric Company," "Three, Two, One, Contact," and a new mathematics series. However, today I am here to talk about our work with fire safety. In the interest of time, I have a summary of the testimony that I will present, and I would like to show a short videotape when I finish.

For the past five Children's Television Workshop has been, using "Sesame Street," working with fire educators, fire departments, child care agencies, parents and others to try to reduce the appalling number of fatalities and serious injuries sustained by preschool children. This effort resulted from a request from the U.S. Fire Ad-

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ministration to explore using "Sesame Street's" enormous appeal and credibility and the television medium to teach lifesaving skills to young children and their parents.

A 6-month study, funded by the administration and by FEMA, concluded that simple messages—such as understanding fire and burns, learning about smoke detectors, and getting to know firefighters—could be taught on television without undue danger of misunderstanding by 2- to 5-year-olds. The study cautioned, however, that some fire safety messages are inappropriate for television and are best taught through actual practice with an adult. An example of inappropriate use of television for preschool audiences is showing dangerous activities such as playing with matches. Even though an announcer's voice warns against the danger, children—who are notorious imitators—may respond only to the visual portion.

As a result of the study, FEMA then funded the development of special materials to assist fire educators and others in teaching fire safety to young children. The "Sesame Street" fire safety resource package was produced and contains Bert and Ernie skits, games, songs, and a record that teaches two potentially frightening messages—how to stop, drop, and roll if your clothes catch fire, and to put a burn in cool water.

A major outreach effort over the past 4 years has had broad impact throughout the country. A few examples: Local task forces were formed, bringing together fire service personnel, parents, child care staffs, hospital burn units, merchants associations, private and public organizations, local television stations, Girl Scout groups, Armed Forces bases, and others. These task forces plan and promote fire safety activities such as "Sesame Street" fire safety festivals.

There is extensive local and national media interest and coverage. Hundreds of hours of television and radio coverage, together with newspaper articles, have greatly helped to heighten community consciousness of the need for fire education.

In some areas, fire inspectors and State day care licensing departments require regular practice of fire safety techniques. Parks and recreation departments have enhanced their summer programs by using teenage youth workers to stage Bert and Ernie skits daily for different groups of preschoolers.

Congressman Brown, I would like to add that we have experimented with teleconferences using telephone call-ins, initially in Alaska, where we reached simultaneously 240 communities with fire safety information.

It is not possible for us to track all of the groups and areas using the "Sesame Street" fire safety program. As part of its concern for the safety of young children, for example, "Good Morning, America" featured the "Sesame Street" approach to fire safety in August of 1982 and again in October 1984. Those network broadcasts resulted in thousands of requests for materials and information. Added to "Sesame Street" itself, which reaches an estimated 9 million children and 5 million adults daily, that's a lot of coverage.

Successful projects tend to take on a life of their own and spawn other activities or stimulate other groups to tackle related issues. For example, the newly founded New York Safety Coalition trains teenagers from the New York City Volunteer Corps to teach senior citizens in high-risk areas about the care and use of smoke detectors. Children's Television Workshop is a part of that effort.

Nearly one-half of the victims of residential fire death and injury are small children and people over 60. However, not all of the residences in the United States are currently equipped with working smoke detectors. Public awareness of the value and need for working smoke detectors, in our opinion, would be furthered by naming a National Smoke Detector Day. The efforts of individual fire departments would multiply and be greatly enhanced by such a national program.

For many years, Children's Television Workshop has trained young people to act as tutors of young children, to reinforce the educational objectives of Sesame Street as well as fire safety. Teenage energy and creativeness could be used in other programs to increase fire safety in their neighborhoods. Two such activities, for example, could be the formation of arson watch teams and a teen-to-teen program geared toward teenage parents who have limited life experience.

Children's Television Workshop hopes that in time teaching basic lifesaving fire safety skills will become as natural a part of early education as teaching language and number skills. A major goal is to introduce fire safety into all preschool and kindergarten programs. I had hoped to be able to announce today that a couple of States had introduced such legislation for their State kindergarten programs, but it is a little premature, but it is in the works.

In 1973 "America Burning," a report by the National Commission on Fire Prevention and Control, was published. One of its recommendations was that Americans must be educated about fire safety. To initiate a second wave of bold new fire safety efforts, we would like to see all the issues around fire safety become part of the President's annual State of the Union address. This could give fire safety the spotlight it needs to move up in priority on the Nation's agenda for positive social change.

The success of the Sesame Street Fire Program has led to another joint venture with FEMA. We are exploring ways of teaching young children safety information about natural hazards—floods, hurricanes, tornadoes, earthquakes, et cetera—and of course fire is often a major consequence of a natural disaster. This investigation also has the support of the National Weather Service.

Again, with the U.S. Fire Administration and FEMA, we have their support for updating our fire safety resource package and revising it to meet the expanding needs of fire educators and those who care for and live with preschoolers. The Children's Television Workshop will continue to explore ways of extending the power of "Sesame Street" and its other productions to increase the fire and natural hazards safety information level of our Nation's families.

Thank you.

[The prepared statement of Ms. Davis follows:]

Testimony Given by Evelyn Payne Davis, Vice President, Community Education Services, Children's Television Workshop

Mr. Chairman and Members of the Subcommittee, thank you for the opportunity to appear before you today. For the past five years Children's Television Workshop has been working with fire educators, fire departments, child care agencies, parents, teachers and state and city agencies to try to reduce the appalling disproportionate number of fatalities and serious injury sustained by the most vulnerable members of our society—preschool children. This effort resulted from a request from the U.S. Fire Administration that we explore the feasibility of using the enormous appeal and credibility of Sesame Street and the television media to teach lifesaving skills to young children and their parents. A six-month study, funded by FEMA, concluded that simple messages (such as understanding fire and burns, learning about smoke detectors, and getting to know firefighters) could be taught on television without undue danger of misunderstanding by two to five-year-olds. The study cautioned, however, that some fire safety messages are inappropriate for television and are best taught within the context of a real-life lesson on fire so that the techniques can be reinforced through actual practice with an adult. Examples of this are: crawl low under smoke and stop, drop and roll if your clothes catch fire. Other inappropriate uses of television for preschool audiences include showing dangerous activities such as playing with matches. Even though an announcer's voice warns against the danger, children—notorious imitators—may respond only to the visual portion.

Again, at FEMA's request, special materials were developed to assist fire educators and others to bring safety messages to young children. The Sesame Street Fire Safety Resource Package was "produced and contains Bert and Ernie skits, games, songs and a record that teaches how to stop, drop and roll and to put a burn in cool water—two potentially frightening messages.

This major outreach effort over the past four years has had broad impact throughout the country. A few examples:

Formation of local task forces comprised of fire service personnel, parents, child care providers, hospital burn units, merchants associations, government agencies, social service organizations, local television stations, Girl Scout groups, armed forces bases, ladies fire auxiliaries, etc. that plan and promote fire safety activities built around the Sesame Street materials;

Extensive and concentrated media attention and both local and national support. Hundreds of hours of television and radio coverage, together with thousands of news articles, have greatly helped to heighten community cons;ciousness of the need for fire education;

In some areas, fire inspectors and state day-care licensing departments require regular practice of fire safety techniques;

Hundreds of communities regularly sponsor Sesame Street Fire Safety Festivals to reinforce their educational activities and reach additional families with the information;

Parks and recreation departments have enhanced their summer programs by using teen-age youth workers to stage the Bert and Ernie skits daily for different groups of preschoolers; and

Numerous groups have incorporated the Sesame Street Fire Safety Program into their regular ongoing activities.

It is not possible to track all of the groups and areas using the Sesame Street Program. As part of its concern for the safety of young children, however, Good Morning America featured the Sesame Street approach to fire safety on August 2, 1982, and again on October 8, 1984. Those network broadcasts resulted in several thousand requests for materials and information. Sesame Street itself reaches an estimated nine million children and five million adults daily, and fire safety is now an ongoing part of the show's safety curriculm.

Successful projects tend to take on a life of their own and spawn other activities or stimulate the thinking of other groups to tackle related issues. Children's Television Workshop's work with fire safety led to a relationship with the American Red Cross of Greater New York, the Consumer Products Safety Commission and other city groups and has resulted in the newly-founded New York Safety Coalition. The Coalition has mounted a drive to inform senior citizens in high fire risk areas about the care and use of smoke detectors. The Coalition trains teenagers from the City Volunteer Corps (CVC) in the installation of smoke detectors and other fire safety issues. These teenagers then go out in teams and assist the senior citizens.

Many Americans die and suffer burn injuries in residential fires each year. A majority of the deaths occur at night while sleeping people are overcome by smoke before they can escape. Nearly one half of those victims are small children and people over age 60. Only about one-half of the residences in the United States are currently equipped with working smoke detectors. A large percentage are not in working condition or are not in use because of lack of understanding. Public awareness about the value and need for working smoke detectors would be furthered by the establishment of a National Smoke Detector Day. Currently, individual fire departments sponsor such activities, but their efforts would multiply greatly and be enhanced by a national program.

Much has been said in other contexts about the positive role that young adults can play in their communities. Part-time employment of real value could be provided to youth in communities throughout the country who would then help seniors with the understanding, use and maintenance of smoke detectors, as demonstrated by the New York Safety Coalition Smoke Detector Program.

For many years, Children's Television Workshop has trained young people to function as tutors to reinforce the educational objectives of Sesame Street with preschool children. This youth-to-youth initiative also includes fire safety education. The number of ways in which teen-age energy and creativeness could be used to increase fire safety in their neighborhoods is almost endless. Two important activities would be arson watch teams and a teen-to-teen program geared toward the increasing number of teen-age parents who have limited life experience.

Most people feel that fires happen to other people—not to them. But they do. According to the National Fire Protection Association's Fire Analysis Division, 68.5% of civilian fire injuries in 1984 occurred in residential properties—or 4,240 deaths and 19,275 injuries. This represents a small decrease in injuries from 1983. How many lives might have been saved if fire safety practices were as well known as one's own name!

Last week's New York Times ran a story about an experiment sponsored by the Missouri Department of Elementary and Secondary education, which demonstrated the value of teaching parents how to rear their babies. The evaluation report showed that toddlers, by age 3, showed mental and linguistic growth far exceeding that of other children. We all know this about our own children. How exciting it would be, however, if a determined effort was made by all public education programs to reach children during the early years of rapid growth and development with safety information.

CTW hopes that, in time, teaching basic lifesaving fire safety skills will become as natural a part of early education as teaching language and number skills. A major goal is to introduce fire safey into the preschool curriculum everywhere.

The fire safety movement in this country was initiated as a result of the report "America Burning" by the National Commission on Fire Prevention and control. In the last decade progress has been made to reduce the number of fires and fire-related deaths. There are more fires in America, however, than in any other industrialized nation. To initiate a second wave of bold new fire safety efforts, we would like to see all the issues around fire become part of the President's yearly State of the Union address. This could give it the spotlight it needs to move up in priority on the nation's agenda for positive social change.

The achievements and success of the Sesame Street Fire Safety Program has led to another joint venture with FEMA. The Children's Television Workshop has been asked to explore ways of teaching young children safety information about natural hazards - floods, hurricanes, tornadoes, earthquakes, etc. And, of course, fire is often a major consequence of a natural disaster. This investigation is proceeding with the support of the National Weather Service as well as other organizations and agencies.

With FEMA's support, the Sesame Street Fire Safety package is being updated and revised to meet the expanding needs of fore educators, and those who care for and live with pre-schoolers.

The Children's Television Workshop throughout its existence has worked in partnership with the public and private sectors to demonstrate and utilize the powerful resource that television represents for the education of our nation's youth. We will continue to explore ways of extending the power of Sesame Street and our other productions to increase the fire and natural hazards safety information level of our nation's families.

Thank you.

EVELYN PAYNE DAVIS

Evelyn Payne Davis is Vice President for Community Education Services (CES) at the Children's Television Workshop. In that capacity, she heads a community level program unique in the annals of television.

Designed to reach out to young television viewers of "Sesame Street" and other CTW productions, the division helps parents and teachers better utilize the television medium as an instruction tool. She directs a national staff working in urban and rural communities across the country.

Mrs. Davis joined CTW in 1969 and was elected a Vice President in 1971 with responsibility for the Community Education Services Division.

Before joining the Workshop, Mrs. Davis was Director of Fund Development and Community Relations for the New York Urban League for three years. She served as Fund-Raising and Public Relations Director of the Harlem YMCA for ten years.

Mrs. Davis is a member of the Advisory Board of the New York State Migrant Center, Member of the New York Urban League's Board of Directors, Past President of the Coalition of 100 Black Women, Chairperson of Jobs For Youth, Inc., and Member, Board of Directors of the Channel L Working Group.

Mrs. Davis is also a member of the Women's Economic Advisory Committee of the Economic Development Administration of New York City, National Media Advisory Council of the March of Dimes Birth Defects Foundation and the Women's Forum.

Mr. WALGREN. Thank you very much.

Ms. DAVIS. I would like to show you a short tape, if I may?

Mr. WALGREN. Fine. How long is the tape?

Ms. DAVIS. Five minutes.

Mr. WALGREN. Five minutes? OK, good. We are going to go right and finish up in the right way, so go ahead. We'll be happy to see it.

Ms. DAVIS. Thank you.

[A short videotape was shown.]

Mr. HARTMAN. Children under the age of 5 account for 17 percent of all fire deaths. Isn't that awful? That is way out of proportion to the rest of the population, but teaching preschoolers about fire safety is very, very difficult, so 3 years ago the Federal Government enlisted the help of CTW, the Children's Television Workshop, the "Sesame Street" people, to see if they could find a way to reach very young children with this kind of information.

Anne Marie Santoro is manager of the Sesame Street fire safety program. Edward Donaldson from Dade County in Florida is one of the hundreds of fire chiefs from across the United States who is now using the new Sesame Street fire safety program in his community, and wait until you hear about this and see this. Good morning, Anne Marie. Nice to see you. Chief, nice to have you with us this morning.

You spent 6 months, Anne Marie—right?—trying to figure out how do you communicate information to young children about fire safety. What did you learn?

Ms. Santoro. Well, David, as a result of a study that was funded by the Federal Emergency Management agency, we learned that we couldn't do it all on television, and that is primarily because of the amount of fear that is involved when you deal with a topic like fire. Now Sesame Street assumes that a child is watching the program by themselves, so we would never want to show anything on Sesame Street that might frighten the child.

Also, because preschoolers are notorious imitators, we would never want to show someone playing with matches on the screen because we would be afraid that the child might emulate that behavior. Our Sesame Street research staff discovered that children attend more to what they see on television than to what they hear, so we might show someone playing with matches and the audio track might say, 'Now, children, don't play with matches because....' The children would most probably focus in on that very attractive match play and not the audio message.

However, we did discover that there were certain topics that we could safely teach on television to this age group.

Mr. HARTMAN. All right. We'll look at one of those right now, for those of you Sesame folks out there, Mr. Hooper in his shop, and they learned at the Children's Television Workshop that they could teach about smoke detectors and how they work. Watch Mr. Hooper, now.

[A "Sesame Street" skit was shown.]

Mr. HARTMAN. Chief, what did you learn from all their research, and you have been involved, you are a professional in all this business. Did you learn anything new from what they learned?

Chief **Donaldson**. David, we really did. We learned some very important things about how children learn, what they can learn, things for example that children in a smoke-filled environment, when they see the fireman dressed out in the tools of the trade—the suit, the mask, the helmet, perhaps an axe, a hose, whatever—see this as a very frightening apparition or a monster, so instead of being the friendly kind of person that they knew at the fire station, he now suddenly is somebody that is very frightening. So instead of seeing you as a rescuer, in effect really they see you as somebody to run and hide from.

Mr. **Hartman**. Just the opposite of the response you want—right?—from them.

Chief **Donaldson**. Just the opposite, yes. So then they tend to hide. They do not come toward you. They are very difficult to find, and consequently they are much more difficult to save.

Mr. **Hartman**. Let's take a look, now—this isn't from Dade County but from Columbus, OH—at how they are using, the fire department is using, some of this new information in Columbus. Now watch this.

[Fire personnel were shown in a classroom setting.]

Mr. **Hartman**. Wow. No wonder you all are so excited about all of this. What have you found out, Anne Marie, about the importance of people being available to answer questions about all of this?

Ms. **Santoro**. We found that the most frightening messages, the ones where you really need an adult there to just whether or not a child is ready to deal with the concepts, the ones that are better to deal with on a 1-to-1 basis, face to face, adult to child—for instance, the notion of someone's clothes catching on fire is a very frightening concept and a good example of this—you need an adult there for that personal interaction, to answer the questions of the child and to help relieve any fears that they might have and to keep those nightmares away.

So we have designed a song, and special song. It is called "Stop, Drop, and Roll." It is sung by Oscar the Grouch. If you know anything about Oscar, you know he hates just about anything, so when he sings something about a positive statement, it's a real endorsement, I think, for his young fans. It's a catchy tune. It's repetitive, which is very important for this particular age group, and we are finding that there are adults out there who are learning these things for the first time, also.

Mr. **Hartman**. Let's watch Oscar and listen to Oscar the Grouch's "Stop, Drop, and Roll." Listen to this.

[A "Sesame Street" sketch was shown.]

Mr. **Hartman**. Fabulous. What has been the reaction in your community, Chief?

[The videotape ended.]

Mr. **Walgren**. Thank you very much for showing us that.

Ms. **Davis**. Thank you. That concludes my statement.

Mr. **Walgren**. As somebody who has small children, there are a lot of people out there that really appreciate that. We certainly do thank you for it.

Let's then turn to Mr. Gerard. We are apparently going to be under some pressure from outside the room, from people who want to come in here at 1 o'clock, and I hope we can finish by then. That gives us about 15 minutes, and I think we can, but let's try to do it in consideration of their time, but we will take what time we require. Mr. Gerard?

STATEMENT OF JOHN C. GERARD, WASHINGTON REPRESENTATIVE, NATIONAL FIRE PROTECTION ASSOCIATION, ACCOMPANIED BY OLIVIA TORRES AND HER FATHER, OF DALY CITY, CA

Mr. **Gerard**. Thank you, Mr. Walgren. I think one of the things that I will do is reserve our contribution to Wednesday morning videos to another time.

It is an honor once again to appear before the committee. We have been here before, testifying about our Nation's fire problem. Today, significantly, is the 113th anniversary of the great Chicago fire, which is the event that Fire Prevention Week commemorates. I think it is also very gratifying, and should be gratifying to the people of this Nation, that in spite of all the competing priorities that the members have, that they are here today providing leadership to help all of us improve the awareness of potential solutions to this very pressing national problem.

You know Fire Prevention Week began in 1911. The first Presidential proclamation was in 1922 and was signed by Woodrow Wilson, but today we are here to talk about the value and the variety of fire safety education programs that are currently available. You have seen several videotapes. You have seen other types of materials, slide tapes. You have heard presentations of programs that exist across the country. You have heard statistical information that says the fire problem is coming under control. It is not controlled but it is getting there.

I think what that really says is that the programs are working. I think country wisdom has a saying "If it's not broken, don't fix it." I don't really think the fire safety public education program is broken. I don't think it needs fixing. I think it is like sitting in the car with your foot off the gas. We need to step on the accelerator. If the car doesn't go, then we ought to fix it. I don't think we are stepping on the accelerator as much as we should.

I think Mr. Henry and Mr. Granito both pointed out that they are implementing their program but it needs more oomph, it needs more push. One of the things that I am aware of is that people in many parts of the country are not aware of materials that are available. There are materials available but they need to know about them, so I really think that the program is there. There is material there.

Now rather than use statistics to demonstrate that there are programs that really do work, we have asked Olivia Torres to join us today with the best possible proof, and that is factual example, an example of how programs do work. Olivia, in 1984, was personally responsible for saving the lives of five members of her family and her own life. She learned this as a result of the "Learn Not To Burn" curriculum materials in the first grade, in elementary school. Her story is but one of 208 individual occurrences of lifesaving activity that have occurred as a result of the "Learn Not To Burn" curriculum materials.

But rather than me continuing to talk on and on, I would like to ask Olivia to tell you exactly what happened. I think, like most 7-

year-olds, she would respond well to your questions rather than just being like some old fire chief like me and just start rattling on, so perhaps if you could kind of lead her into that with a few questions, Mr. Walgren and Mr. Boehlert, I think you will find her story very, very interesting.

[The prepared statement of Mr. Gerard follows:]

STATEMENT OF JOHN C. GERARD, NATIONAL FIRE PROTECTION ASSOCIATION

"Prevention of Residential Fire Fatalities"

The National Fire Protection Association (NFPA) is a non-profit, technical and educational membership organization, founded in 1896. It has remained the principal public advocate for fire safety since its inception.

Our membership is drawn from the many disciplines involved in and concerned about the national fire problem. We are not a trade or industry association. No one group or interest is dominant in the association. The only common denominator in our membership is a concern about fire safety. Our members include fire service personnel, fire marshals and inspectors; city managers; architects, engineers and educators; health care facility operators and similar groups from commerce, industry as well as Federal State and local Governments. In addition, NFPA's sources of income are so diverse that no single interest group can exercise financial influence. The many activities of NFPA are described in Attachment "A".

THE FIRE PROBLEM IN AMERICA

To a very large and a real extent, the fire problem in America is a human problem. Some people have called it, a preventable tragedy. The irreplaceable loss that makes this such a tragedy is the recurring thousands of fire deaths. 80% of these fire deaths occur in the home, one or two at a time. Almost 40% of the people involved are persons over the age of 65 or under the age of 10. The young, the old and the poor are the largest at-risk group in our population.

We are here today to review the value and variety of the fire safety education programs currently available. You have seen video excerpts from some of our materials and of course there are materials available from many other sources. There are many good, effective programs. The country does not need new programs. What is needed is support for the delivery of existing programs at the local level. The delivery of these by State and local educators is hampered by a lack of funding and a lack of knowledge about what materials are available and how to obtain them.

So often, though, in hearings such as this, the Honorable Members are treated to lengthy, elaborate and detailed statistical analyses that are intended to prove or disprove a particular point of view. Today, we have with us the one best method of proof. Factual Example.

We are honored to have with us a heroic young girl who, in 1984, was personally responsible for saving the lives of her mother and three brothers using behavior and information she learned at school from the Learn Not To Burn Curriculum that is produced by NFPA.

Her story is but one of 208 individual, documented life saving occurrences credited to the Learn Not To Burn program.

But the members don't waant to listen to me. Let me introduce to the Honorable Committee—Olivia Torres, and ask her to tell you in her own words about that night at Christmas time in 1984. Accompanying Olivia are her grandmother, Belle Rodriguez and her father, Angel Torres.

ATTACHMENT "A"

Activities of NFPA generally fall into two broad, interrelated areas: technical and educational.

Our basic technical activity involves development, publication and dissemination of timely consensus standards intended to minimise the possibility and effects of fire in all aspects of contemporary activity.

At the same time, continuing efforts are directed to all age groups of the general public with the goal of helping them reduce or eliminate the loss of life and property from fire by making good fire safety habits a way of life.

Public fire safety education

"Learn Not to Burn" is the theme and focus of NFPA's broad public fire safety education program, which includes a national media campaign, a fire safety curriculum for school children, and an extensive outreach program supported by a regional field network of NFPA representatives.

The national media campaign is best known for its series of 19 television public service announcments featuring actor Dick Van Dyke. These "spots," distributed to television stations throughout the United States as well as in Canada and abroad, have been credited with saving at least 146 lives to date. During 1982, the national TV campaign was supported by increased use of print and radio messages. A new strategy included an "all-media blitz" centered around the single fire safety message "Stop, Drop and Roll" to extinguish a clothing fire. Timed to coincide with release of the new television spot with this message, thousands of campaign kits containing print ads, radio copy and suggestions for local programs were distributed around the country to help establish local "Stop, Drop and Roll" campaigns. This support will be continued with future Learn Not to Burn messages.

The Learn Not to Burn Curriculum is a comprehensive school program designed for classroom use in teaching fire safety to children in grades kindergarten through eight. Since its release in 1979, the Curriculum has been credited with saving 62 people from fire injury or death. Material in the Curriculum is structured around 25 key fire safety behaviors and is organized in three learning levels. The program provides participatory activities that are integrated into regular classroom subject areas such as arithmetic, language arts and sciences. With the aid of the Regional Field Network, NFPA provides assistance to many communities seeking to implement the program in their school systems. The regional representatives play key roles in supporting other outreach efforts such as the traveling Learn Not bo Burn Center. To include a series of interactive exhibits that teach fire safety behaviors, the Center will be designed to provide a community focus for fire safety education as it visits various sites across the country. Another form of educational activity is carried on by NFPA through its public information program. The Association increasingly is recognized by the electronic and print media as the nation's authoritative source of technical background, data, and consumer advice on the fire problem and fire safety. Staff specialists frequently are interviewed by national as well as local media, and the Association continues to supply timely material on a regular basis to more than 4,000 specialized periodicals in virtually every field. The Association also produces posters, booklets, flyers and children's items that teach personal, home and on-the-job fire safety.

In another area of public education, NFPA is the national sponsor and the originator of Fire Prevention Week. This annual observance dates back to 1911 and is held each October to commemorate the "Great Chicago Fire" which occurred on October 9, 1871 which killed 250 people and left 100,000 homeless.

NFPA also works through its Continuing Education Division to disseminate knowledge and methodology on fire-related problems and solutions by developing and presenting NFPA sponsored and contracted seminars. These seminars concern interpretation and application of codes and standards, plus application of state-of-the-art fire protection technology to any fire-related area. Current seminars support the *Life Safety Code* (NFPA 101) and the *National Electrical Code* (NFPA 70) and present up-to-date fire protection technology in the areas of Detention and Correctional Occupancies, Hotels/Motels, and Shipyards.

Publications

The Association's technical and general interest publications program ranges across the fire protection spectrum. In addition to standards and codes, it includes handbooks, reference books, textbooks, training manuals, audio-visual packages, and films. The *Fire Protection Handbook,* now in its 15th edition, is the "bible" in its field. Other handbooks pertain to *Industrial Fire Hazards,* the *National Electric Code, Life Safety Code,* and the *Flammable and Combustible Liquids Code.* Reference works published by NFPA include *Fire Facts,* a compilation of current fire loss experience in the United States. A series of textbooks supports fire science educational programs. Enjoying wide use is the *NFPA Inspection Manual* covering inspection procedures for all types of property, while *Introduction to Fire Protection*—a training program based on the current edition of the *Handbook*—is geared to the industrial community. Practical information on fireground tactics, apparatus and fire service administration is found in a variety of books and training aids geared to the needs of the public fire service.

Among NFPA periodicals are *Fire Journal,* published six times a year for members; *Fire Service Today,* monthly, for fire service leaders; and *Fire Technology,* quarterly. The membership newsletter is *Fire News*, issued eight times during the year. Other periodical publications include the *Noticiero Technology sobre Incendios*, a Spanish-language bulletin containing reports, articles, meeting notices and other material of interest to the Spanish-speaking fire community throughout the world. In addition, several of the NFPA membership Sections have their own newsletters.

Codes and standards

Standards and codes are developed by more than 175 NFPA Technical Committees, each of which represents a balance of affected interests. More than 2,400 individuals serve on the Association's Committees, all on a voluntary, unpaid basis. Committees operate according to the detailed official Regulations Governing Committee Projects and are administered by the Standards Council which reports to the Association's Board of Directors.

Once adopted by the NFPA membership at either the Annual Meeting of a Fall Meeting, and issued by the Standards Council, standards are published and made available for voluntary adoption. The standards have great influence because they are widely used as the basis of legislation and regulation at all levels of government, from local to national. Many are referenced by agencies of the Federal Government such as in the regulations of the Occupational Safety and Health Administration (OSHA); the documents also are used by insurance authorities for risk evaluation and premium rating. The current number of standards is about 260.

Each official NFPA document is published in a booklet edition. All documents appear in the annual, multi-volume set of *National Fire Codes* and the annual Codes Supplement. Among the most widely used official documents are the *National Electrical Code* (NFPA 70); the *Life Safety Code* (NFPA 101); and the *Flammable and Combustible Liquids Code* (NFPA 30).

Advisory services

Technical advisory services are provided on both formal and informal basis to anyone legitimately concerned with fire-related problems. Within the Engineering Services Division are four special Field Services, each established to provide guidance in the application of pertinent standards. These Field Services are: Electrical, Flammable Gases, Flammable Liquids, and Marine. Through its Marine Chemist Qualification Board, the Association administers the NFPA Certificated Marine Chemist program. Technical staff members of the Division also serve as instructors, lecturers and panelists on a variety of fire safety programs of organizations based all over the globe.

Similarly, the Public Fire Protection Division is an information resource for the fire service. Staff members—all with fire department management experience—advise individual fire departments on application of NFPA standards pertaining to the fire service, and take part in training programs and conferences for fire department personnel throughout North America and abroad.

LEARN NOT TO BURN CURRICULUM LIVES SAVED

Incident No. 24—San Francisco, California (December 27, 1984)—While on Christmas vacation, six year old Olivia Torres used the "crawl low in smoke" technique to safely escape her mother's home. Olivia awakened early in the morning to find her bedroom filled with smoke and flames spreading around her bunk bed which she shared with her brothers, Angel, 3, and Freddie, 5. She immediately awakened her brothers and showed them how to "crawl low in smoke" out of the bedroom. Olivia was also able to lift her 6 month old brother, Hector, out of his crib and awaken her mother. The family of five safely exited the home.

Once outside, Olivia counted heads and suddenly realized an elderly woman living in the duplex home was still inside. She alerted the firefighters who rescued the woman. In all the confusion, Olivia lost her Cabbage Patch doll Christmas gift.

Olivia lives with her grandmother in Daly City where she receives Learn Not To Burn instruction at the Colma elementary school. Jan Gratton, Regional Representative, recently conducted the inservice workshop for the teachers of Daly City.

Young Olivia was recently honored at school for her heroism. She received several trophies and awards including a smoke detector. The best gift of all was a brand new Cabbage Patch doll.

CITY OF DALY CITY,
Daly City, CA, January 18, 1985.

NATIONAL FIRE PROTECTION ASSOCIATION,
Battermarch Park,
Quincy, MA.

DEAR SIR: I would like to relay to you a "Learn Not To Burn" story that will warm your heart.

The Daly City Fire Department implemented the Level I, Learn Not To Burn curriculum into all first grade classes of the Jefferson Elementary School District and several other smaller schools in October 1984. Approximately 800 students have been receiving the training.

Little did six year old Olivia Torres or her teacher suspect that what she was learning would have such a direct affect on her life in such a short period of time. Olivia is credited with saving the lives of four family members during the Christmas holidays. Here is how the story goes.

At about 12:30 a.m. on December 27, 1984, Olivia and three younger brothers, ages 5 years, 3 years and 6 months old, were asleep in their bedroom at her mother's house in San Francisco. Olivia was awaken by heat and smoke. Olivia saw smoke and flames at the foot of her bed. She rolled out of bed, woke the two older brothers and instructed them to crawl out of the room. Olivia carried her six month old brother to the living room. She woke her mother who then called the fire department. By this time, the front door was impassable and the family used the rear exit. A plan which Olivia had instructed her family in.

Once out of the building, Olivia counted heads and realized that an elderly lady from the upstairs apartment was not present. Firemen were able to locate the lady and bring her to safety also.

The fire was started by an electric space heater and the home and all personal belongings, including Christmas gifts, were a total loss. Mrs. Torres is thankful that Olivia was taught this life saving information and could react without panic. They still have their most valuable possessions of all, each other.

Olivia is being honored by her school, the Daly City Fire Department is presenting her with two smoke detectors, and the Daly City City Council is giving here a special commendation.

We encourage all other schools to teach this curriculum and parents to discuss fire safety at home. When Olivia was asked how she knew what to do, she replied, "I learned it at school." What better reward for our efforts is there.

Thank you.

Sincerely,

RICHARD B. BRIDGES,
Fire Chief.
(By) DAVID A. KAPLER,
Fire Marshal.

[From the San Francisco Chronicle, Jan. 19, 1985]

LITTLE LIFESAVER GETS HER DAY

(By Birney Jarvis)

Olivia Torres, all 4 feet 3 inches and 60 pounds of her, stood tall and proud yesterday as she was honored at her Daly City school for saving her family from a fire.

The 6-year-old Colma Elementary School first-grader is credited by fire officials with saving her mother and three younger brothers in the blaze on December 27 in San Francisco's Ingleside District.

But her heroism cost the little girl her most-treasured Christmas present: her Cabbage Patch doll, Cindy.

Olivia normally lives with her grandmother, Belle Rodriguez, in Daly City, but over the Christmas holiday she moved in with her mother and brothers in their home at 44 A Ney Street.

The pigtailed girl awakened early in the morning to find her bedroom filled with smoke and flames spreading around her bunk bed, which she shared with her brothers, Angel, 3, and Freddie, 5.

Instead of panicking, Olivia later told firefighters, she remembered everything about fire safety that she had learned from her teacher, Armida Fernandez-Hartzler, as part of a program for first-graders that was begun recently in San Mateo County.

School officials said Olivia "coolly and calmly" awakened her brothers and showed then how to crawl under the smoke out of the bedroom.

She returned to lift her 6-month-old brother, Hector, from his crib and again crawled through the smoke. In the confusion, she left her doll behind.

Olivia said she awakened her mother, Joyce Torres, and the family fled through a back door. Her father, Angel, is separated from her mother and was not there.

"I wasn't that afraid because I learned in class what to do," Olivia told firefighters.

"It really was the most remarkable thing," said Marie Rizuela, a secretary for the Daly City Fire Department and a member of the Jefferson Elementary School District governing board.

"After Olivia got everyone outside, she counted heads and suddenly realized an elderly woman living in the duplex next door was still inside and in danger."

She alerted firefighters, who rescued the woman. Officials said there were no injuries.

San Mateo County's pioneer [Learn Not to Burn] school project, coordinated by Daly City Fire Marshall David Kapler, was begun October 3. The yearlong program is sponsored by the Lions Club and Pacific Gas & Electric Co.

Since then several other school districts, including the San Francisco Unified School District, have adopted the program.

During the assembly yesterday in the school auditorium, Olivia, accompanied by her parents, grandmother and brothers, smilingly accepted several trophies and awards for her heroism.

But the best gift of all, she said with a wide smile was a brand-new Cabbage Patch doll named Fanni Edith.

"Now everything is nice, Olivia said.

[From the Peninsula Progress, Mar. 3, 1985]

HER LEARNING SAVED LIVES

A 6-year-old Daly City girl who saved the lives of five people in a fire last December received a standing ovation this week from members of a national firefighting association.

About two months before the fire, Olivia Torres' first grade teacher at Colma Elementary School began devoting a few minutes each week to the teaching of fire safety, using a program called Learn Not to Burn.

"Olivia learned her lesson well." said Jan Gratton, a regional representative for the National Fire Protection Association, which developed the educational materials for use in elementary schools around the country.

The fire protection association took time out of a one-day meeting being held at the Hyatt Hotel in San Jose Thursday to pay tribute to the diminutive hero, who wore a ruffled pinafore and black patent shoes for the occasion.

Olivia was visiting her mother in San Francisco on Dec. 27. She awakened after midnight to find that an electric space heater had started a fire at the foot of her bed.

Remembering what she learned in school. Olivia rolled out of bed, staying close to the ground, woke up her 3- and 5-year-old brothers and showed them how to crawl underneath the smoke.

She picked up her 6-month-old brother from his crib and went to the next room to wake her mother. Olivia found the front door blocked, but led everyone out safely through the back door.

Once outside, Olivia realized an elderly woman who lived in an uppoer apartment was still inside. She told firefighters and they got the woman out too.

"The house was a total loss," said Olivia's grandmother Belie Rodriguez. "But I am lucky to have my daughter, my granddaughter and my grandsons alive."

Pam Powell of the fire protection association said 25 students from all over the United States have saved 54 lives after having the Learn Not to Burn lessons in school.

NFPA LAUNCHES NATIONAL FIRESAFETY POSTER CONTEST

The National Fire Protection Association (NFPA) will begin sponsoring an annual National Firesafety Poster Contest for children in kindergarten through the eight grade, NFPA President Robert W. Grant announced today.

"We want to involve school children throughout North America in this unique contest," Mr. Grant said, "and invite teachers, parents, and the fire service to encourage children to participate."

This year's contest theme is "What Keeps Me Safe from Fire." The theme was chosen to produce many different kinds of images by children of all ages.

To allow children of the same age to compete with each other, the contest has three age-specific categories: kindergarten through the second grade; thrid through the fifth grades; and sixth through the eighth grades.

First, Second, and Third Place Winners in each category will be selected from all entries. In addition, a Grand Prize Winner will be selected, with this winning poster published by NFPA for the 1986 National Fire Prevention Week observance.

NFPA will showcase all the winning posters during its Annual Meeting in Atlanta, Georgia on May 19-22, 1986.

Prizes will be awarded "to encourage widespread participation and to show our appreciation for the talent of the winning artists," Mr. Grant noted.

Prizes for the winning posters will be:

GRAND PRIZE WINNER

The Grand Prize Winner, his or her parents, teacher, and a representative of the local fire department will each receive an all-expense paid trip to Atlanta, Georgia in May 1986 and will be recognized during the Association's Annual Meeting Ninetieth Anniversary celebration. The Grand Prize Winner will also receive a $250 U.S. Savings Bond. The school of the Grand Prize Winner will receive $1,000 worth of firesafety educational materials from the NFPA.

FIRST PLACE WINNERS

The First Place Winner is each category will receive a $250 U.S. Savings Bond. The school of each First Place Winner will reveive $500 worth of firesafety educational materials.

SECOND PLACE WINNERS

The Second Place Winner in each category will recieve a $100 U.S. Savings Bond. The NFPA will also award $500 worth of firesafety educational materials to the school of each Second Place Winner.

THIRD PLACE WINNERS

The Third Place Winner is each category will receive a $50 U.S. Savings Bond. The school of each Third Place Winner will receive firesafety educational materials valued at $250.

NFPA will acknowlege each entry.

"The contest rules are very simple," says NFPA's Manager of Education Programs, Pam Powell. "All children in kindergarten through the eighth grade are eligible, and each child may submit one entry. The child's original art must be on white or manila paper, and must be done using crayons or brush paint. To protect the art, entries can be mailed flat or rolled, but cannot be folded. Entries must be postmarked by January 15, 1986, and all entries become the property of NFPA."

So that winners can be notified, the back of each entry must have the child's name and full address; the name, address, and telephone number of parent(s); the child's grade; and the name and school address of the child's teacher.

"The poster contest will be especially effective as an educational activity when teachers have students create their posters as part of a firesafety lesson," according to Ms. Powell. Free basic firesafety lesson plans are available to teachers from the NFPA; please include a stamped, self-addressed envelope and identify grade level with the request.

All entries must be submitted by Janaury 15, 1986, to the Public Education Department, National Fire Protection Association, Attention: CONTEST, Batterymarch Park, Quincy, MA 02269. Additional copies of the National Firesafety Poster Contest Rules are available from the same address.

To request a free basic firesafety lesson plan, write the Public Education Department, National Fire Protection Association, Attention: TEACHER, Batterymarch Park, Quincy, MA 02269.

The firesafety education activities of the National Fire Protection Association include the Learn Not to Burn® public service announcements with Dick Van Dyke, the *Learn Not to Burn Curriculum®*, and the annual nationwide observance of Fire Prevention Week.

The Learn Not to Burn public service annoucements have saved 146 lives in documented incidents. The Association's *Learn Not to Burn Curriculum* is recommended by the National Education Association and has saved 62 lives in documented incidents.

The non-profit association for firesafety, the NFPA was founded in 1896 and has more than 32,500 members worldwide. Association headquarters are in Quincy, Massachusetts.

Learn Not To Burn® Timeline

1974: Learn Not To Burn Phrase Introduced.

1975: Learn Not To Burn Television Spots (Dick Van Dyke).

1978–79: Learn Not To Burn Curriculum—LNTB Radio Spots w/Minority Celebrities, w/Sports Figures, Spanish Speaking; Print Campaign, Newspapers, Magazines, Billboards.

1981: Learn Not To Burn Curriculum (2nd edition).

1982: Media Kit—Stop, Drop and Roll ("Crawl"—1983).

1982: Learn Not To Burn Field Representatives (10 Regions).

1982: First Learn Not To Burn Conference (10 Regional Representatives and State Contacts).

1983: Learn Not To Burn "Mini" Conferences (One Day in Each Region).

1983: Distribution of "Project Burn Prevention" Materials (Pre-School to Adult).

1983: Secondary Firesafety Education Curriculum.

1984: 10-year anniversary to Learn Not To Burn.

1985–86: Learn Not To Burn Curriculum (3rd edition).

History of Learn Not To Burn®

Since its earliest days, NFPA has emphasized firesafety education as a way to reduce fire deaths, injuries, and loss of property. Over the years, the Association's efforts have evolved into a national program of firesafety awareness and education—the Learn Not to Burn Program.

The philosophy that gives shape to the Learn Not to Burn Program stresses teaching positive, practical firesafety behaviors.

To ensure that firesafety messages would reach the public in the most effective manner, NFPA conducted an intense national survey. The results of this study determined that a national media campaign, using both television and radio, would accomplish the goal. The study also indicated that firesafety messages should be clear, appealing, and helpful. Above all, the messages should reflect NFPA's commitment to teaching positive firesafety behaviors.

NATIONAL MEDIA CAMPAIGN

In 1975, NFPA released the first of 24 Learn Not to Burn television public service announcements featuring Dick Van Dyke. These 30-second spots stress the positive behavioral approach to take when faced with a fire situation. NFPA files contain documented incidents in which 144 lives have been saved as a direct result of the Learn Not to Burn television spots. Someone in danger from fire knew what to do because he/she had seen one of the television advertisements.

NFPA also developed radio announcements tailored to specific segments of the population. One series of radio ads was aimed at people living in "inner city" areas, while another radio campaign was designed for American Indians living on U.S. Government-controlled reservations.

In 1982, a new dimension was added to the campaign with the simultaneous release of "all-media kits," which contained teaching materials, newspaper ads, radio public service announcements, and sample print materials for distribution.

SCHOOL PROGRAMS

NFPA has also concentrated its resources on reaching youngsters in schools. The guiding philosophy is the same: to provide a firesafety curriculum that helps classroom teachers convey positive messages children can remember into adulthood.

The results of several years of development, testing, and evaluation was the *Learn Not to Burn Curriculum*. The *Curriculum* was developed and tested from 1976–1979 and is presently used in more than 37,000 classrooms. Structured around 25 key lifesaving firesafety behaviors, the *Curriculum* integrates firesafety into other subjects taught in the nation's schools. In 1981, the second edition of the *Curriculum* was released, with minor modifications from the first edition. Today, 61 documented life saves have been reported as a direct result from lessons learned at school through the *Curriculum*.

LNTB OUTREACH

To assist in LNTB Implementation nationwide, NFPA developed the Learn Not to Burn Regional Field Network in 1982. Regional representatives now provide technical assistance and in-service workshops to educators and community leaders on Learn Not to Burn implementation strategies. All highly skilled professionals, the Regional Representatives work within their specific geographic regions to provide effective liaisons between NFPA and community firesafety educators. The Regional Representative program is funded through a cost-sharing grant between the National Fire Protection Association and Federal Emergency Management Agency.

Each August, the Learn Not to Burn Conference at NFPA headquarters in Quincy brings together firesafety educators and experts from across the nation—and overseas—to discuss new ways of reaching the public, to exchange ideas, and to share experiences.

To mark Learn Not to Burn's ten-year anniversary in 1984, NFPA re-focused the Conference from information-sharing to identifying LNTB goals for the decade ahead. The 1985 LNTB Conference is devoted to achieving the number one goal identified the year before: development of the third edition of the life-saving *Learn Not to Burn Curriculum*.

OFFICIAL RULES, 1985 NATIONAL FIRESAFETY POSTER CONTEST

THEME

All submitted posters will illustrate the theme, "What Keeps Me Safe From Fire."

ELIGIBILITY

All children in kindergarten through the eighth grade during the 1985-86 school year are eligible to participate. Each child may submit one entry.

FORMAT

All entries must be original are created by the child using crayons or brush paint on white or manila paper.

SUBMITTING ENTRIES

So that winners can be notified, the following information must appear on the back of each entry: (1) Name and full address of the child; (2) Name, address, and telephone number of parent(s); (3) the grade of the child; and (4) Name and school address of the child's teacher. Contestants may use the form at the end of the Official Rules to provide this information.

Entries must be submitted rolled or flat to protect the art; folded posters cannot be eligible for prizes.

All entries must be postmarked by *January 15, 1986*, and mailed to: Public Education Department, National Fire Protection Association, Attention: CONTEST, Batterymarch Park, Quincy, MA 02269.

Submitted entries become the property of the National Fire Protection Association and cannot be returned.

JUDGING

Each poster will be assigned to one category corresponding to the grade of the child (kindergarten through second grade, third through fifth grades, or sixth through eighth grades). First, Second, and Third Place Winners in each category will be selected. In addition, a Grand Prize Winner will be selected.

The National Fire Protection Association will judge all entries; the decision of the judges is final.

PRIZES

Grand prize winner

The Grand Prize Winner, his or her parents, teacher, and a representative of the local fire department will each receive an all-expense paid trip to Atlanta, Georgia in May 1986 and will be recognized during the Association's Annual Meeting Ninetieth Anniversary celebration.

The Grand Prize Winner will also receive a $250 U.S. Savings Bond. The School of the Grand Prize Winner will reveive $1,000 worth of firesafety educational materials from the NFPA.

First place winners

The First Place Winner in each category will receive a $150 U.S. Savings Bond. The school of each First Place Winner will receive $500 worth of firesafety educational materials.

Second place winners

The Second Place Winner in each category will receive a $100 U.S. Savings Bond. The NFPA will also award $500 worth of firesafety educational materials to the school of each Second Place Winner.

Third place winners

The Third Place Winner in each category will receive a $50 U.S. Savings bond. The school of each Third Place Winner will receive firesafety educational materials valued at $250.

TEACHER PARTICIPATION

The National Firesafety Poster Contest will be especially effective as an educational activity when students create their poster as part of a classroom firesafety lesson. The National Fire Protection Association urges teachers to use their students' participation in the National Firesafety Poster Contest as a supplement to classroom instruction in firesafety. Teachers are invited to write for a free basic firesafety lesson plan. When requesting the free basic firesafety lesson plan, please identify grade level and send a stamped, self-addressed envelope to: Public Education Department, National Fire Protection Association, Attention: TEACHER, Batterymarch Park, Quincy, MA 02269.

1985 NATIONAL FIRESAFETY POSTER CONTEST ENTRY BLANK

Your Name:____

Your Address:______________________________________
____
__________________________(ZIP)________

Name of Your Parent(s):______________________________

Address of Your Parent(s):____________________________
____
__________________________(ZIP)________

Phone Number of Your Parent(s):____(   )____________________

Name of Your Teacher:________________________________

School Address of Your Teacher:________________________
____
__________________________(ZIP)________

Mr. **Walgren**. Well, welcome to Washington, Olivia. Are you having fun here? A little bit, maybe?

Miss **Torres**. Yes.

Mr. **Walgren**. What can you tell us happened in that fire?

Miss **Torres**. My father was sleeping, and I smelled smoke and I jumped off the bed, my bunk bed.

Mr. **Walgren**. Was this at nighttime?

Miss **Torres**. Yes.

Mr. **Walgren**. And you woke up?

Miss **Torres**. Yes.

Mr. **Walgren**. What woke you up?

Miss **Torres**. Smelling the smoke.

Mr. **Walgren**. The smoke woke you up, and then what did you do when you woke up?

Miss **Torres**. I jumped off my bunk bed.

Mr. **Walgren**. Were you in the top bed?

Miss **Torres**. Yes.

Mr. **Walgren**. Then what happened? You jumped out of bed because there was a lot of smoke there?

Miss **Torres**. Yes.

Mr. **Walgren**. What did you do next?

Miss **Torres**. I got my baby brother.

Mr. **Walgren**. Where was he?

Miss **Torres**. In the crib.

Mr. **Walgren**. In the crib in the same room as you?

Miss **Torres**. Yes.

Mr. **Walgren**. Is that right? And what did you do? Did you pick him up out of the crib?

Miss **Torres**. I had to pick him up with one hand and crawl.

Mr. **Walgren**. And you crawled with your baby brother, on the floor?

Miss **Torres**. Yes.

Mr. **Walgren**. Gosh. Then what did you do? Where did you take him?

Miss **Torres**. I took him in the living room. My mother went in the living room, too.

Mr. **Walgren**. And then what happened next?

Miss **Torres**. My mother called the firemen.

Mr. **Walgren**. How many people in your family were in the house then?

Miss **Torres**. Five.

Mr. **Walgren**. Five people, and did you wake them all up, or did you wake somebody else up who then tried to wake some people? Were they all sleeping?

Miss **Torres**. I woke up my father.

Mr. **Walgren**. And did he know enough to drop and roll, or crawl, I guess, in this instance?

Miss **Torres**. I told my brother to crawl in my mother's room.

Mr. **Walgren**. And your brother crawled into your mother's room, then?

Miss **Torres**. Yes.

Mr. **Boehlert**. How did you know to get down on the floor and crawl? Why didn't you just run?

Miss **Torres**. Because——

Mr. **Boehlert**. Did you learn something about that in school or on television?

Miss **Torres**. At school.

Mr. **Boehlert**. At school? Well, you did very well. Everyone is very proud of you, Olivia.

Mr. **Walgren**. So then your brother crawled in to wake your mother?

Miss **Torres**. No, my father woke up my mother.

Mr. **Walgren**. Your father woke up your mother, and then were you able to alert the rest of the people?

Miss **Torres**. Yes.

Mr. **Walgren**. How old are you, Olivia?

Miss **Torres**. Seven.

Mr. **Walgren**. Seven years old, and you were 6 when this happened?

Miss **Torres**. Yes.

Mr. **Walgren**. Is that right? It's a good thing you had bunk beds, because you were the equivalent of a smoke detector, I guess. [Laughter.]

You were a good smoke detector up there by the ceiling. Did everyone get out of the house?

Miss **Torres**. Yes.

Mr. **Walgren**. Was there a lot of damage done to the house by the fire?

Miss **Torres**. Yes.

Mr. **Walgren**. But everyone got out safely?

Miss **Torres**. Yes.

Mr. **Walgren**. That's a great story. Can you add anything to it, Mr. Torres? Are you Olivia's father?

Mr. **Torres**. Yes.

Mr. **Walgren**. Great.

Mr. **Torres**. In the fire, she gave me the—she woke me up when she handed me my little young son. He was about 3 or 4 months old at that time. She called the other brother, because all was in that room, and I wake up my wife and we went by the back yard, because her room is in the front. Her room was the front room and the second was my room and my wife, you know, the living room was inside. We had to go through the back yard because the fire started in the front room.

Mr. **Walgren**. Yes. Well, we sure appreciated your making those circumstances real, because no matter how many sentences you type of a piece of paper and how many people read things into microphones, it isn't really real and it doesn't communicate the way the actual person who has experienced it does.

After the hearing we would like to take a couple of pictures with you, if you wouldn't mind, because we really feel other people need to know as much as they can about your experience, because it's going to happen to a lot of people and it's very important that people think about it in advance.

Mr. **Torres**. OK.

Mr. **Walgren**. Well, thank you very much.

Mr. **Boehlert**. Olivia, did you go back to school and tell all your classmates about your experience?

Miss **Torres**. Yes.

Mr. **Boehlert**. Wasn't that an exciting thing to tell them? Did they pay attention to you?

Miss **Torres**. Yes.

Mr. **Boehlert**. I'll bet you they did, and I'll bet you when you have future classes on fire safety, all your students and classmates will pay real close attention because something could happen, and we never know when it's going to happen.

Thank you so very much, Olivia.

Mr. **Walgren**. Mr. Bruce, would you like to raise anything?

Mr. **Bruce**. No, thank you, Mr. Chairman.

Mr. **Walgren**. Mr. Gerard, do you have any finishing thoughts?

Mr. **Gerard**. Just that I think this is a very real and graphic demonstration that the public education programs really do work. They just need to spread further. More people need to know about them, and we can lick this problem, we really can. It is a problem that can be solved if we are committed to it.

Thank you, Mr. Walgren.

Mr. **Walgren**. OK. Well, thank you very much for making this contribution to our process here. If we can assure that the messages that we have heard this morning are not lost on the Congress, they won't be lost on the public either, and I think we can play some role in spreading the word and extending the message to others who might not otherwise hear it, so on behalf of the committee let me thank you all for your contribution this morning. Thank you.

OK. That concludes the hearing, and I especially appreciate everyone's effort that they made to develop this record. We hope that we will see more of you in the future. Thank you.

[Whereupon, at 1 p.m., the subcommittee recessed, to reconvene at the call of the Chair.]

APPENDIX

The Society of the
Plastics Industry, Inc.

1025 Connecticut Avenue
Washington, D.C. 20036
(202) 822-6700

October 22, 1985

Honorable Doug Walgren
Chairman,
Subcommittee on Science, Research and Technology
U.S. House of Representatives
2319 Rayburn House Office Building
Washington, D.C. 20515

Dear Representative Walgren:

In conjunction with National Fire Prevention Week and the hearing held by your Subcommittee on "Prevention of Fatalities in Residential Fires" on October 9, 1985, The Society of the Plastics Industry would like to take this opportunity to share with you our concern on fire safety. We also request that these comments be incorporated into the hearing record.

The plastics industry is dedicated to developing and manufacturing safe products that improve the quality of life for all of us. Advancements in medical science (artificial hearts and prothesis), safety (break-resistant bottles and protective helmets) and health (protective food packaging) — to name just a few of the many thousand applications — are all possible thanks to plastics.

We, as an industry, are vitally concerned about keeping Americans safe from all hazards, including fires. We have, for the past decade, supported fire safety research and have achieved significant advances in making plastics safer in a fire environment. And, our industry has a history of working closely with building code officials and the fire community to improve fire safety.

It is a fact that the death rate from fires in America is higher than in most other countries. However, it should be noted that between 1939 and 1980 when our population almost doubled from 132 million to 230 million that the annual fire death rate dropped from 10,000 to 5,600. Additionally, the fact is that while the fire death rate dropped 62 percent during those four decades the annual use of plastics materials grew astronomically from two billion pounds to 37 billion pounds.

However, even one death per year from fires is too many. For that reason, the plastics industry has supported efforts to prevent fires before they can cause loss of life or property through early detection and quick suppression systems (sprinklers). This concept has been strongly endorsed by the U.S. Fire Administration of the Federal Emergency Management Agency and most major fire service organizations.

This approach is essential because all organically-based materials -- from wood to wool to plastics -- will burn, and the resulting combustion products are toxic. Repeated tests have confirmed that carbon monoxide — produced by virtually all burning materials — is the greatest toxic hazard in real fires.

Two decades of research (much of it supported by the plastics industry) and millions of dollars have produced more than a dozen different small-scale combustion toxicity tests throughout the world. Unfortunately, such small-scale tests are deficient in several areas: (1) no agreement exists on how to burn materials to reflect real fire conditions, (2) different tests yield different rank order for the same material, and (3) laboratory tests do not take into account the relationship of toxic hazard to fire growth. Other combustibility properties — ignitability, flame spread, rate of heat release, and ventilation — all affect toxic hazard.

A total approach to hazard analysis based on computer modeling is being developed by the Center for Fire Research at the National Bureau of Standards and several private research facilities. It is hoped that a useable hazard analysis system will be available in the near future to help architects and builders in their selection and use of materials.

Regardless of how soon such tests are perfected, the plastics industry will continue to support and encourage early detection and quick suppression (sprinklers) as the best way to protect Americans from the hazards of fire.

The Society of the Plastics Industry, Inc. (SPI) is the principal trade association for this nation's plastic industry which has gross shipments of over $80 billion. We represent more that 1,800 member firms, including manufacturers of raw materials derived from petrochemical feedstocks (resins), machinery and molds used to make finished products, and the producers and distributors of those finished products.

We appreciate your time and consideration of our comments. If you need further information or have any specific questions, please contact Marina Brockmann of our Federal Affairs Department at 822-6713.

Sincerely yours,

Margaret Rogers
Director
Federal Government Affairs

MR/law

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